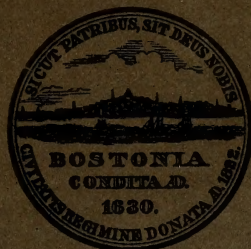


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ANNUAL REPORT OF SCHOOL COMMITTEE

CITY OF BOSTON, 1919

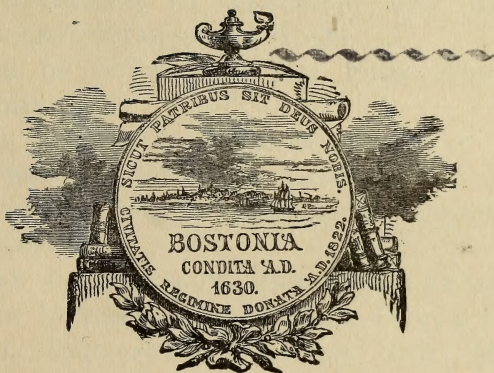


CITY OF BOSTON
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DOCUMENTS
OF THE
SCHOOL COMMITTEE
OF THE
CITY OF BOSTON
FOR THE YEAR 1919

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SCHOOL DOCUMENT NO. 1.—1919

SCHOOL COMMITTEE OF THE CITY OF BOSTON

ANNUAL REPORT OF THE BUSINESS AGENT

FOR THE

FINANCIAL YEAR ENDING JANUARY 31, 1919

AND

BUDGET

FOR THE

FINANCIAL YEAR ENDING JANUARY 31, 1920

JULY, 1919



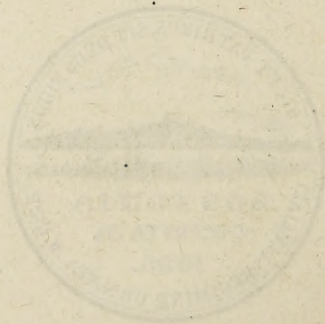
CITY OF BOSTON
PRINTING DEPARTMENT
1919

BOSTON, MASS., July, 1919.

To the School Committee:

In compliance with section 110 of the Rules of the School Committee, I submit herewith the annual report of the Business Agent for the financial year February 1, 1918, to January 31, 1919, both included.

WILLIAM T. KEOUGH,
Business Agent.



ANNUAL REPORT OF THE BUSINESS AGENT.

MONEY AVAILABLE FROM THE TAX LEVY.

The report of the Business Agent for the financial year ending January 31, 1918, included a résumé of all legislative acts granting the School Committee authority to make appropriations for the support of the public schools beginning with Chapter 400 of the Acts of 1898 up to and including Chapter 132 of the Special Acts of 1918.

With the acceptance of Chapter 206 of the Special Acts of 1919, additional authority to make appropriations has been granted, and the following supplementary statement is made for the purpose of bringing the matter up to date.

Chapter 206 of the Special Acts of 1919 authorizes the School Committee to make the following appropriations upon each \$1,000 of the valuation of the city, on which the appropriations by the City Council are based: (a) For general school purposes: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, four dollars and eleven cents; for the financial year ending on the thirty-first day of January, nineteen hundred and twenty-one, and for each financial year thereafter, four dollars and thirty-eight cents. (b) For the construction and furnishing of new school buildings, both temporary and permanent, including the taking of land therefor, and for school yards, and the preparing of school yards for use, and for the rent of hired school accommodations: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, sixty-five cents; for the financial year ending on the thirty-first day of January, nineteen hundred and twenty-one, and for each financial year thereafter, sixty-eight cents. (c) For the alteration and repair of school buildings, and for furniture, fixtures, and means of escape in case of fire, and for fire protection for existing buildings, and for improving

existing school yards: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, thirty-five cents. (d) For organizing and conducting physical training and exercises, athletics, sports, games and play, and for providing apparatus, equipment and facilities for the same in buildings, yards, and playgrounds under the control of said committee, or upon any other land which the committee may have the right to use for this purpose under the provisions of chapter two hundred and ninety-five of the acts of nineteen hundred and seven: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, eight cents. (e) For the employment of one supervising female nurse, and so many district female nurses as, in the opinion of said committee, are necessary in accordance with the provisions of chapter three hundred and fifty-seven of the acts of nineteen hundred and seven, and for the employment of such number of school physicians as, in the opinion of the committee, may be necessary, and for the care of teeth of school children: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, six cents. (f) For the purpose of conducting educational and recreative activities in or upon school property under the control of said committee, and the use thereof by individuals and associations in accordance with the provisions of chapter one hundred and ninety-five of the acts of nineteen hundred and twelve, and chapter eighty-six of the Special Acts of nineteen hundred and sixteen: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, two cents. (g) For the payment of pensions to members of the teaching or supervising staff of the public schools of said city, and to persons who were annuitants of the Boston Teachers' Retirement Fund at the time when chapter five hundred and eighty-nine of the acts of nineteen hundred and eight took effect, and other teachers who

had retired prior to said time, in accordance with the provisions of said chapter five hundred and eighty-nine, chapter five hundred and thirty-seven of the acts of nineteen hundred and nine, chapter six hundred and seventeen of the acts of nineteen hundred and ten, and chapter five hundred and sixty-nine of the acts of nineteen hundred and twelve, and acts in amendment thereof, and of this act: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, seven cents. (h) For promoting the Americanization and better training for citizenship of foreign-born persons: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, two cents. (i) For vocational guidance: for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, and for each financial year thereafter, two cents. If the school committee shall fail to appropriate the full amount which it is authorized to appropriate for items (d), (e), (f), (h), (i), or any one of them, in any year, it may correspondingly increase the appropriation which it is authorized to make under item (a).

The sums available from the tax levy for the years 1919-20, 1920-21, and thereafter, are therefore as follows:

	1919-20.	1920-21.
General school purposes.....	\$4 11	\$4 38
New buildings, lands, yards and furnishings.....	65	68
Repairs and alterations to school buildings.....	35	35
Physical education.....	08	08
School physicians and nurses..	06	06
Extended use of the public schools.....	02	02
Pensions.....	07	07
Promotion of Americanization.....	02	02
Vocational guidance.....	02	02
Totals.....	\$5 38	\$5 68

FINANCIAL STATEMENT.

On April 15, 1918, the School Committee made the following appropriations on account:

Salaries of instructors	\$2,285,967 00
Salaries of officers	79,142 00
Salaries of janitors	182,000 00
Fuel and light	226,647 00
Supplies and incidentals	201,572 00
Physical education	61,663 90
Salaries and expenses of nurses	30,831 95
Medical inspection	15,084 00
Pensions to teachers	107,911 83
Pensions to attendance officers and janitors	4,288 00
Extended use of the public schools	17,363 32
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	270,029 00
Rents of hired school accommodations	17,500 00
	<u>\$3,500,000 00</u>

On May 20, 1918, the School Committee appropriated the following sums:

Salaries of instructors	\$2,336,132 91
Salaries of officers	75,963 20
Salaries of janitors	196,040 76
Fuel and light	251,373 44
Supplies and incidentals	141,928 18
Physical education	*
Physical education, special appropriation	32,397 05
Salaries and expenses of nurses	6,143 40
Medical inspection	15,085 00
Pensions to teachers	*
Pension to attendance officers and janitors	4,289 24
Extended use of the public schools	16,116 66
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	270,030 16
Rents of hired school accommodations	17,500 00
	<u>\$3,363,000 00</u>

* Full amount appropriated April 15, 1918.

On November 18, 1918, the School Committee appropriated \$17,879.76, receipts from the Smith-Hughes Fund, for "Salaries of Instructors."

On December 16, 1918, the School Committee appropriated \$2,870.55, by transfer from the accrued interest of the Permanent Pension Fund for "Pensions to Teachers."

The sums of the foregoing appropriations were as follows:

Salaries of instructors	\$4,639,979 67
Salaries of officers	155,105 20
Salaries of janitors	378,040 76
Fuel and light	478,020 44
Supplies and incidentals	343,500 18
Physical education	61,663 90
Physical education, special appropriation	32,397 05
Salaries and expenses of nurses	36,975 35
Medical inspection	30,169 00
Pensions to teachers	110,782 38
Pensions to attendance officers and janitors	8,577 24
Extended use of the public schools	33,479 98
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	540,059 16
Rents of hired school accommodations	35,000 00
Total amount appropriated	<u>\$6,883,750 31</u>

During the financial year the School Committee made the following transfers:

On December 16, 1918, from "Salaries of Instructors" to "Salaries and Expenses of Nurses"	\$1,050 00
On January 6, 1919, from "Salaries of Instructors" to "Salaries of Officers"	2,300 00
On January 20, 1919, from "Salaries of Instructors" to "Salaries and Expenses of Nurses"	500 00
On January 29, 1919, from "Salaries of Instructors" to "Supplies and Incidentals"	4,000 00

With the above additions and transfers, the final total credits for the several items for the year were as follows:

Salaries of instructors	\$4,632,129 67
Salaries of officers	157,405 20
Carried forward	<u>\$4,789,534 87</u>

<i>Brought forward</i>	\$4,789,534 87
Salaries of janitors	378,040 76
Fuel and light	478,020 44
Supplies and incidentals	347,500 18
Physical education	61,663 90
Physical education, special appropriation	32,397 05
Salaries and expenses of nurses	38,525 35
Medical inspection	30,169 00
Pensions to teachers	110,782 38
Pensions to attendance officers and janitors	8,577 24
Extended use of the public schools	33,479 98
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	540,059 16
Rents of hired school accommodations	35,000 00
Total credits	<u>\$6,883,750 31</u>

The expenditures were as follows:

Salaries of instructors	\$4,567,760 79
Salaries of officers	157,393 00
Salaries of janitors	372,644 60
Fuel	417,517 98
Light	36,322 88
Power	6,606 59
Supplies and incidentals	345,959 11
Physical education	61,663 90
Physical education, special	29,682 15
Salaries and expenses of nurses	38,123 23
Medical inspection	29,701 01
Pensions to teachers	110,782 38
Payments to permanent pension fund	—
Extended use of the public schools	24,723 90
Pensions to attendance officers and janitors	7,439 10
Repairs and alterations, protection against fire and fire hazard and new furniture and furnishings for old buildings, including new lighting fixtures	532,293 27
Rents of hired school accommodations	40,507 73
Total expenditures	<u>\$6,779,121 62</u>
Total credits brought down	\$6,883,750 31
Total expenditures brought down	6,779,121 62
Balance	<u>\$104,628 69</u>

The balance at the end of the year was made up as follows:

Salaries of instructors	\$64,368 88
Salaries of officers	12 20
Salaries of janitors	5,396 16
Fuel)	
Light)	
Power)	17,572 99
Supplies and incidentals	1,541 07
Physical education	—
Physical education, special	2,714 90
Salaries and expenses of nurses	402 12
Medical inspection	467 99
Pensions to teachers	—
Extended use of the public schools	8,756 08
Pensions to attendance officers and janitors	1,138 14
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	2,258 16
Rents of hired school accommodations	—
Balance	<u>\$104,628 69</u>

APPROPRIATION FOR NEW SCHOOL BUILDINGS, LANDS, YARDS, ETC.

On March 20, 1918, the School Committee passed the following order:

Ordered, That in accordance with the provisions of chapter 267 of the Special Acts of 1916, the sum of seven hundred eleven thousand nine hundred thirty-one dollars (\$711,931) is hereby appropriated for the purpose of constructing and furnishing new school buildings, including the taking of land therefor, and for school yards and the preparing of school yards for use.

This sum thus appropriated for new buildings, lands, yards, etc., forms a part of the tax levy for the year.

This money is expended under the direction of the Schoolhouse Commission and is accounted for by them in detail in their report. It has not been considered wise to introduce such matter into this report, not only for the reason that it would be a duplication of information in the report of the commission, but because for purposes of comparison with expenditures of other years or of other cities it appears better to separate statements of maintenance or operating expenses from the construction accounts.

PHYSICAL EDUCATION.

The total amount of money available for physical education under chapter 295 of the Acts of 1907 was \$61,663.90. The plans laid out for playground activities for the year, however, required a much larger sum and, in consequence, in addition to the above amount, a special appropriation of \$32,397.05 was allowed in the annual appropriation order. The total amount available for this purpose was, therefore, as follows:

Appropriation for 1918-19	\$61,663 90
Diverted from general appropriation	32,397 05
Total amount available 1918-19	<u>\$94,060 95</u>

The expenditures were as follows:

Salaries, regular *	\$45,004 38	
Supplies and incidentals, regular	10,758 05	
		\$55,762 88
Salaries of teachers, playgrounds †	\$24,095 05	
Salaries of janitors, playgrounds	5,045 04	
Supplies and equipment, playgrounds	6,443 08	
		35,583 17
Total expenditures		<u>\$91,346 05</u>
Balance		<u>\$2,714 90</u>

TRIAL BALANCE — PHYSICAL EDUCATION APPROPRIATIONS.

Dr.

Appropriation, physical education	\$61,663 90
Special appropriation, physical education	32,397 05
Stock inventory, December 4, 1917	1,810 49
	<u>\$95,871 44</u>

Cr.

Salaries, schools	\$40,685 75
Salaries, playgrounds	24,095 05
Salaries, playground janitors	5,045 04
Salaries, department	4,318 63
Supplies, schools, etc.	6,009 93
Carried forward	<u>\$80,154 40</u>

* Includes the salaries of the Director of Physical Training and the teachers of the several ranks who serve at the Normal, Latin and high schools.

† This cost of playgrounds is exclusive of the salaries of any part of the supervising staff who were in any way connected with the playgrounds. The complete cost of playgrounds is shown later on in this report under "Costs of Playgrounds."

<i>Brought forward</i>	\$80,154 40
Supplies, playgrounds	6,694 61
Supplies, department	2,424 16
Supplies, undercharged to schools	390 86
Stock inventory, December 1, 1918	3,492 51
Balance unexpended	2,714 90
	<hr/>
	<u>\$95,871 44</u>

Drafts were made on the regular physical education appropriation until it was exhausted, when drafts were begun on the special appropriation.

NURSES.

During the last year it has been found impossible, as it has for the eight preceding years, to keep the expenditures for nurses within the appropriation authorized by chapter 357 of the Acts of 1907, viz., two cents on each one thousand dollars of the valuation of the city, amounting to \$30,831.95.

In addition to the sum available under the above statute, the sum of \$6,143.40 was allowed in the general appropriation order, and the total being found insufficient a transfer of \$1,550 from the appropriation for "Salaries of Instructors" was made (\$1,050 on December 16, 1918, and \$500 on January 20, 1919), making a total appropriation of \$38,525.35.

At the end of the year there remained an unexpended balance of \$402.12.

The total amount available was, therefore, as follows:

Appropriation (chapter 357, Acts of 1907)	\$30,831 95
Diverted from general appropriation	6,143 40
Transfers from "Salaries of Instructors"	1,550 00
	<hr/>
Total amount available	<u>\$38,525 35</u>

The expenditures were as follows:

Salaries of nurses	\$36,879 24
Supplies for nurses	1,243 99
	<hr/>
Total expenditures	<u>\$38,123 23</u>

Total appropriation brought down	\$38,525 35
Total expenditures brought down	38,123 23
Balance	<u>\$402 12</u>

TRIAL BALANCE — NURSES' APPROPRIATION.

Dr.

Appropriation for nurses	\$30,831 95
Diverted from regular appropriation	7,693 40
Stock inventory, December 4, 1917	870 37
Supplies overcharged to schools	144 17
	<u>\$39,539 89</u>

Cr.

Salary, supervising nurse and acting supervising nurse	\$1,405 72
Salaries, assistant nurses	35,473 52
Supplies, schools, etc.	351 68
Supplies, department	915 34
Stock inventory, December 1, 1918	991 51
Balance unexpended	402 12
	<u>\$39,539 89</u>

EXPENDITURES BY SCHOOLHOUSE COMMISSION.

The appropriation made for "Repairs and Alterations, protection against fire and fire hazards, and new furniture and furnishings for old buildings, including new lighting fixtures" (\$540,059.16), and "Rents of hired school accommodations" (\$35,000) were expended under the direction of the Schoolhouse Commission as follows:

REPAIRS AND ALTERATIONS.

Carpentry:

Repairs	\$66,617 74
Alterations	2,355 08
New floors	1,096 54
Hardware	10 90

Furniture and Equipment:

New furniture	35,682 75
Repairs to furniture	23,905 82
New curtains	1,869 20
Curtain repairs	3,379 35
New clocks	117 50
Clock repairs	1,892 90
Electric clock maintenance	1,620 72
Electric clock installation	225 00
Industrial apparatus installation	986 65

Carried forward \$139,760 15

<i>Brought forward</i>	\$139,760 15
Industrial apparatus maintenance	357 73
Manual training and prevocational installation	1,227 10
Manual training and prevocational maintenance	149 20
Reflectoscope maintenance	83 29
Reflectoscope installation	432 00
Vacuum cleaning maintenance	174 21
Vacuum cleaning installation	—
Rubber treads and matting	1,870 70
Gymnasium apparatus	13 92
Blackboards:	
New	535 20
Repairs	5,191 38
Plumbing	65,127 86
Roofing	15,411 10
Painting	32,999 82
Glazing	11,784 77
Heating:	
Repairs	88,795 25
Ventilation	540 28
Care of grounds:	
Gypsy moths	646 00
Planting	1,167 61
Masonry:	
Repairs	33,398 21
Plastering	3,268 27
Paving	5,452 71
Catch-basins	3,703 64
Asphalt and concrete	3,177 14
Waterproofing	—
Grading	320 52
Locks and Bells:	
Bells and telephone installation	1,366 59
Bells and telephone maintenance	2,599 24
Locksmithing	3,402 25
Electric and Gas Work:	
Electric light installation	25,345 01
Electric light maintenance	3,256 50
Gas appliance installation	588 58
Gas appliance maintenance	1,262 43
Fire protection:	
Fire alarm installation	3,282 03
Fire alarm maintenance	2,589 72
Fire escapes, new	6,578 05
Fire escapes, repairs	446 53
Fire extinguishers	1,239 32
Fire protection	2,085 20
<i>Carried forward</i>	\$469,629 51

<i>Brought forward</i>	\$469,629 51	
Miscellaneous:		
Flagstaffs	1,316 05	
Iron and wire work	4,843 72	
Janitors' supplies	343 68	
Care and cleaning	1,372 89	
Teaming	2,600 46	
Motors and engines	2,096 96	
		\$482,203 27

ADMINISTRATION EXPENSES.

Salaries, commissioners and clerks	\$9,110 04	
Salaries, inspectors	27,605 22	
Electric lighting of offices	11 30	
Postage	316 00	
Printing	464 04	
Stationery	761 76	
Advertising	81 15	
Telephone	59 54	
Automobile expenses	7,689 79	
Furniture	1,769 36	
Car fares, traveling expenses	1,732 51	
Boiler insurance	150 49	
Sundries	—	
Subscription	305 70	
Teaming	13 50	
Expert services	—	
		50,070 40
Total repairs and administration expenses		<u>\$532,273 67</u>

RENTS AND TAXES.

Barham Memorial Church	\$600 00	
Boylston street, 48	1,050 00	
Bowdoin and Claybourne streets	120 00	
Columbus avenue, 627	245 00	
Eliot street, Jamaica Plain (Trustees Building)	800 00	
Everett Square Theater	20 00	
Glenway and Harvard streets	600 00	
Harvard street, 111	780 00	
Harvard street, 143 and 145	600 00	
Tremont Temple	175 00	
Franklin Union	5,916 00	
Hanson street, 1	744 00	
Hull street, 24	420 00	
Hyde Park Gymnasium	800 00	
La Grange street, 25	5,451 00	
Moon street	10,595 00	
National Theater	150 00	
North Bennet street, 39	2,930 00	
<i>Carried forward</i>	\$31,996 00	

<i>Brought forward</i>	\$31,996 00	
Parmenter street, 20	70 00	
Saratoga street, 66	600 00	
Tileston street, 52	858 00	
Tremont street, 218	4,573 33	
Walnut avenue and Walnut park	930 00	
Willowwood street, 3	1,500 00	
	<hr/>	
Total rents and taxes		\$40,527 33
		<hr/>

SUMMARY.

Appropriations:

Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	\$540,059 16	
Rents of hired school accommodations	35,000 00	
	<hr/>	
		\$575,059 16

Expenditures:

Repairs and equipment	\$482,203 27	
Administration expenses	50,070 40	
Rents and taxes	40,527 33	
	<hr/>	
		572,801 00
		<hr/>
Balance		\$2,258 16
		<hr/>

INCOME.

The income for the financial year was as follows:

Tuition of non-resident pupils:

Normal School	\$565 00	
Latin and high schools	3,559 39	
Elementary schools	199 75	
Boston Clerical School	81 50	
Trade School for Girls, day and extension classes	3,728 96	
Boston Trade School	2,727 00	
Boston Trade School, evening classes	154 71	
Continuation School, Voluntary	45 00	
Evening high schools	79 50	
Speech improvement classes	—	
Evening elementary schools	94 54	
Summer Review elementary schools	8 00	
Summer Review High School	—	
State wards (from the Commonwealth)	967 50	
Tuition of deaf mutes (from the Common- wealth)	26,452 50	
	<hr/>	
		\$38,663 35
Salaries of instructors overpaid refunded		1,868 59
Smith Fund		324 00
Stoughton Fund		212 00
		<hr/>
<i>Carried forward</i>		\$41,067 94

<i>Brought forward</i>		\$41,067 94
Aid from the Commonwealth for industrial education:		
Trade School for Girls:		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	\$26,986 20	
Boston Trade School:		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	18,928 41	
Boston Trade School, Evening Classes:		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	4,100 19	
Continuation School (Household Arts Class):		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	745 91	
Continuation School, Compulsory:		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	30,822 67	
Evening Practical Arts Courses:		
One-half the net cost of maintenance for the period September 1, 1916, to August 31, 1917	5,003 48	
		86,586 86
One-half tuition charges paid for Boston pupils attending state-aided schools in other cities and towns (from the Commonwealth)		263 74
Traveling expenses of deaf mutes (from the Commonwealth)		2,561 90
Light at polling places (from Election Department)		324 39
Sale of badges to licensed minors		352 75
Sale of books and supplies		1,649 90
Sale of truck		475 00
Damage to property		13 00
Mechanic Arts High, work done for Schoolhouse Commission		92 90
Mechanic Arts High, sale of materials, etc.		—
Sale of manual arts materials (elementary schools)		1,569 27
Manual arts, work done for Schoolhouse Commission		935 15
Incidentals		130 68
Trade School for Girls:		
Sale of products	\$8,723 63	
Interest on deposit	19 72	
Telephone charges	7 80	
		8,751 15
Boston Trade School:		
Sale of products	\$274 62	
Work done for Schoolhouse Commission	1,266 55	
Telephone charges	—	
		1,541 17
<i>Carried forward</i>		\$146,315 80

<i>Brought forward</i>		\$146,315 80
Continuation School, Compulsory:		
Sale of products	\$1,257 85	
Work done for Schoolhouse Commission	108 08	
Telephone charges	—	
	<hr/>	1,365 93
Telephone charges		503 58
Rents of school buildings		434 88
Forfeited advance payments:		
Evening high schools	\$3,726 38	
Evening elementary schools	1,298 00	
Boston Trade School, evening classes	620 00	
Evening Trade School, girls	35 00	
Interest	306 13	
	<hr/>	5,985 51
Sale of second-hand furniture, etc. (Schoolhouse Commission)		1,398 34
Dog licenses	\$21,994 00	
Less damages by dogs	2,908 45	
	<hr/>	19,085 55
 Total income		 <u>\$175,089 59</u>

INCOME FROM TRUST FUNDS.

Bowdoin Dorchester School Fund	\$180 00
Eastburn School Fund	435 00
Franklin Medal Fund	35 00
Gibson School Fund	3,076 10
Horace Mann School Fund	307 00
Peter P. F. Degrand School Fund	1,507 59
Teachers' Waterston Fund	144 00
	<hr/>
	<u>\$5,684 69</u>

The above total of \$5,684.69 from the income of the above funds is available for and limited to expenditures under the provisions of these funds.

AID FROM THE COMMONWEALTH FOR INDUSTRIAL
EDUCATION.

Under the provisions of chapter 471 of the Acts of 1911, chapter 106 of the Acts of 1912, chapter 805 of the Acts of 1913, and chapter 174 of the Acts of 1914, the Commonwealth has paid over into the city treasury during the past financial year the sum of \$86,586.86.

This sum is one half the net cost of maintenance of schools and classes established with the approval of the State Board of Education, as shown on page 18.

Trade School for Girls:

From September 1, 1916, to August 31, 1917	\$26,986 20
Boston Trade School:	
From September 1, 1916, to August 31, 1917	18,928 41
Boston Trade School, evening classes:	
From September 1, 1916, to August 31, 1917	4,100 19
Continuation School (Household Arts Class):	
From September 1, 1916, to August 31, 1917	745 91
Continuation School, Compulsory:	
From September 1, 1916, to August 31, 1917	30,822 67
Evening Practical Arts Courses (Evening Elementary Schools):	
From September 1, 1916, to August 31, 1917	5,003 48
Total	<u>\$86,586 86</u>

The Commonwealth does not bear any part of the cost of the buildings or their original equipment. At the present time there are eight activities established with the approval of the State Board of Education which come under the provisions of the above legislation, viz., Trade School for Girls, Evening Trade School (Girls), Boston Trade School, Boston Trade School Evening Classes, Continuation School (Household Arts Class), Compulsory Continuation School, Class for Training of Continuation School Teachers and Evening Practical Arts Courses.

NET EXPENDITURES.

Total expenditures	\$6,779,121 62
Total income	175,089 59
Net expenditures *	<u>\$6,604,032 03</u>
Expenditures for new schoolhouses, additions, etc. (by the Schoolhouse Commission) †	711,931 00
Total net expenditures ‡	<u>\$7,315,963 03</u>

* That part of the total expenditures coming from the School Committee share of the tax levy.

† Partly from loans and partly from the tax levy. For details see the report of the Schoolhouse Commission.

‡ Exclusive of interest and sinking fund.

COMPARISON OF EXPENDITURES.

The following statement shows the expenditures for the financial years 1917-18 and 1918-19, exclusive of lands and buildings, with the increases and decreases in the several items:

	1918-19.	1917-18.	Increases, 1918-19.
Salaries of instructors.....	\$4,567,760 79	\$4,418,639 17	\$149,121 62
Salaries of officers.....	157,393 00	150,527 11	6,865 89
Salaries of janitors.....	372,644 60	351,941 29	20,703 31
Fuel and light.....	460,447 45	303,380 54	157,066 91
Supplies and incidentals.....	345,959 11	358,523 82	* 12,564 71
Physical education, including special appropriation.	91,346 05	92,186 18	* 840 13
Nurses.....	38,123 23	35,490 34	2,632 89
Medical inspection.....	29,701 01	28,339 92	1,361 09
Pensions to retired teachers.....	110,782 38	104,347 95	6,434 43
Payments to permanent pension fund.....		5,432 37	* 5,432 37
Extended use of the public schools.....	24,723 90	32,888 99	* 8,165 09
Pensions to attendance officers and janitors	7,439 10	8,001 02	* 561 92
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures (by Schoolhouse Commission).	532,293 27	438,970 57	93,322 70
Rents of hired school accommodations (by Schoolhouse Commission).	40,507 73	32,352 26	8,155 47
Totals.....	\$6,779,121 62	\$6,361,021 53	\$418,100 09

* Decrease.

PENSIONS TO TEACHERS.

In 1908 and each year thereafter up to and including 1914, the School Committee, under the authority of section 4 of chapter 589 of the Acts of 1908, appropriated for the purpose of paying pensions and making payments to the Permanent Pension Fund, the sum of five cents on each \$1,000 of the valuation of the city, upon which appropriations by the City Council are based.

During the year 1913-14 the sum so appropriated was found insufficient to pay pensions for the year, and the additional sum of \$880.43 was transferred from the accrued interest of the Permanent Pension Fund.

In 1914-15 a transfer of \$7,628.60 from the same fund was found to be necessary for the same reason.

Chapter 304 of the Acts of 1915 has made available from the tax levy seven cents on each \$1,000 of the valuation of the city, which, during the past year, amounted to \$107,911.83. This sum was found insuffi-

cient and it became necessary to transfer \$2,870.55 from the accrued interest of the Permanent Pension Fund, making a total of \$110,782.38 expended for the purpose during the year.

Chapter 289 of the Special Acts of 1916 provided that "The sums payable by the Commonwealth to the City of Boston under the provisions of section 13 of chapter 832 of the Acts of the year 1913, being an act to establish a retirement system for public school teachers, as reimbursement for certain pensions paid by the city to retired school teachers, shall be put into the current pension fund held by the School Committee of the City of Boston and used in accordance with the provisions of chapter 589 of the Acts of the year 1908." Under this act the sum of \$22,490.03 paid over by the Commonwealth to the city became available during the current financial year and was entered to the credit of the Permanent Pension Fund.

Since the enactment of chapter 589 of the Acts of 1908, payments as pensions and to the Permanent Pension Fund have been distributed as shown in the following table:

FINANCIAL YEAR.	Pensions to Retired Teachers from the Tax Levy.	Payments to the Permanent Pension Fund from the Tax Levy.	Payments to the Permanent Pension Fund by the Commonwealth.*
1908-09.....	\$1,678 50	—	
1909-10.....	8,075 12	\$119,181 08	
1910-11.....	26,247 88	39,946 77	
1911-12.....	55,350 31	12,420 53	
1912-13.....	64,510 76	5,681 66	
1913-14.....	† 72,893 19	—	
1914-15.....	† 81,482 96	—	
1915-16.....	90,011 87	15,741 25	
1916-17.....	96,029 97	11,631 48	
1917-18.....	104,347 95	5,432 37	\$24,321 96
1918-19.....	§ 110,782 38	—	22,490 03
Totals.....	\$711,410 89	\$210,035 14	\$46,811 99
Grand total, ten years.....	.....	.....	\$968,258 02

* Under chapter 289, Special Acts of 1916.

† Including \$880.43 transferred from the accrued interest of the Permanent Pension Fund.

‡ Including \$7,628.60 transferred from the accrued interest of the Permanent Pension Fund.

§ Including \$2,870.55 transferred from the accrued interest of the Permanent Pension Fund.

DISTRIBUTION OF EXPENDITURES.

The distribution of the total expenditures, exclusive of lands and buildings, pensions, repairs, alterations and rents, in percentage of the whole sum, is as follows:

Salaries of instructors.....	\$4,567,760 79	75.0
Salaries of officers.....	157,393 00	2.6
Salaries of janitors.....	372,644 60	6.1
Fuel and light.....	460,447 45	7.6
Supplies and incidentals.....	345,959 11	5.7
Physical education.....	91,346 05	1.5
Nurses.....	38,123 23	0.6
Medical inspection.....	29,701 01	0.5
Extended use of the public schools.....	24,723 90	0.4
Total.....	\$6,088,099 14	100.0

SUPPLIES AND INCIDENTALS.

The expenditures for the year under the appropriation for Supplies and Incidentals were as follows:

Text-books	\$44,290 81
Supplementary books	11,078 54
Reference books	2,718 01
Music sheets	102 14
Globes	169 00
Maps	2,025 24
Charts	636 12
Pianos	2,775 00
Other musical instruments (new)	176 25
Musical instruments (repaired)	—
Piano covers, etc.	75
Piano tuning	1,620 00
Moving pianos	207 88
Manual training supplies (high and elementary schools)	33,758 73
Drawing supplies (high and elementary schools)	17,116 39
Science apparatus and supplies	4,692 15
Laboratory assistance, perishable supplies and incidentals	874 09
Supplies and equipment, commercial classes	2,383 78
Typewriters for high schools	3,745 77
Carried forward	\$128,370 65

<i>Brought forward</i>	\$128,370 65
Kindergarten supplies	3,037 46
Sewing supplies and equipment	2,092 14
Cooking supplies and equipment	8,779 05
Supplies for Busy Work	2,199 75
Penmanship supplies, high schools	88 68
Penmanship supplies, elementary schools	976 01
Supplies and equipment for Compulsory Continuation School,	4,394 72
Trade School for Girls, supplies and equipment	6,346 58
Boston Trade School, supplies and equipment	6,165 93
Evening Practical Arts Courses	161 71
Supplies for general educational purposes	11,162 65
Printing and printing stock	22,291 37
Advertising	269 74
Records, proceedings, etc.	2,311 99
Account books	246 95
Stationery	69,707 10
Postage (offices and departments)	3,713 90
Postage (schools)	1,396 82
Office equipment	625 64
Office supplies and incidentals	1,347 43
Janitors' supplies	15,871 69
Expressage	823 23
Railroad and other fares for Horace Mann School pupils (except street car tickets)	901 90
Car tickets as authorized by Board	5,526 00
Tuition, wards of the city	7,662 45
Tuition, others	12,313 85
Diplomas	2,459 46
Removing ashes	1,898 75
Surety bonds	70 00
School Committee Contingent Fund	404 35
Board of Superintendents' Contingent Fund	518 94
Assistance at teachers' examinations	1,119 50
School exhibits	111 50
Telephone and telegraph	4,034 22
Telephone (schools)	1,011 85
Bath expenses	914 32
Badges for licensed minors	167 25
Supplies Advisory Committee on Music	307 30
Professional and Cultural Courses for Teachers	1,783 44
Supplies and equipment for automobiles (including one new auto truck and one new runabout)	6,156 76
Services of accountants, auditing accounts	1,000 00
Expert services to Business Agent	1,267 40
Traveling expenses of Business Agent	65 75
Supplies for Department of Educational Investigation and Measurement	503 98
Sundries	3,378 95
Total	<u>\$345,959 11</u>

FUEL AND LIGHT.

During the past financial year it has been found impossible to make contracts for the delivery of coal, and it has been purchased wherever possible and at the best prices that could be obtained.

The coal was purchased from the following firms: City Fuel Company, Metropolitan Coal Company, G. W. Bail & Co., E. J. Babcock, Brackett Coal Company, Brighton Coal Company, Burton-Furber Coal Company, D. J. Cutter & Co., F. W. Darling Company, Doherty Coal Company, East Boston Coal Company, Massachusetts Wharf Coal Company, E. S. Morse Company, C. Murphy & Son, M. R. Murphy, McGovern Coal Company, Roxbury Coal Company, Staples Coal Company, Stetson Coal Company, Suffolk Coal Company, J. T. Tighe Company, Wellington-Wild Coal Company, J. A. Whittemore Sons and Batchelder Brothers.

In addition to the coal placed in the bins of the school-houses, bituminous coal was purchased and placed in storage during the financial year to the amount of 5,613 tons. Of this amount 4,843 tons were placed in storage at the Milton yard of the City Fuel Company and 770 tons were placed in storage at the Talbot avenue yard of C. Murphy & Son.

The prices paid for bituminous coal range from \$10.25 to \$11.73 per ton of two thousand (2,000) pounds. The prices paid for anthracite coal range from \$10.25 to \$12.50 per ton of two thousand (2,000) pounds. A few small lots were purchased below \$10.25, but the total quantity so purchased was negligible.

FUEL AND LIGHT.

Bituminous Coal. Number of Tons.	Anthracite Coal. Number of Tons.	
30,621 ¹⁸⁸⁵ ₂₀₀₀	6,251 ⁶¹⁰ ₂₀₀₀	\$406,783 46
Expenses sampling, testing and expert advice on coal		2,501 74
<i>Carried forward</i>		\$409,285 20

<i>Brought forward</i>	\$409,285 20
Expenses moving coal and wood	2,201 00
508½ cords of wood	8,665 68
Charcoal	42 50
	<hr/>
	\$420,194 38
Add premiums allowed contractors on account of quality of coal exceeding contract requirements	—
	<hr/>
Deduct penalties exacted from contractors on account of quality of coal falling below contract requirements	—
	<hr/>
	\$420,194 38
Deduct amount charged to appropriation, Extended Use of the Public Schools, for cost of fuel used in school centers and other activities	2,676 40
	<hr/>
Net total, fuel	\$417,517 98

LIGHT AND POWER.

Electric current for light	\$30,576 50
Electric current for power	6,511 09
Gas	7,562 82
Mazda lamps	7 02
	<hr/>
	\$44,657 43
Deduct amount charged to appropriation, Extended Use of the Public Schools, for cost of light used in school centers and other activities	1,727 96
	<hr/>
Net total, light and power	42,929 47
	<hr/>
Total net expenditures, fuel and light	<u>\$460,447 45</u>

COST IN DETAIL.

On the appended sheets will be found the costs of each school in detail, the average membership or the average attendance and the cost per pupil based on average membership or average attendance, the cost per pupil hour of instruction, and the cost per pupil hour for all direct charges.

The costs of the several playgrounds are also given and the cost per pupil per session.

The total cost of each group of schools is also given, and the average cost per pupil is shown.

These figures give only the costs of the several schools or groups of schools, exclusive of costs of administration, supervision and general charges.

To get the whole cost, the costs of administration, supervision and general charges must be apportioned among the several groups of schools.

The method of apportioning the costs of administration, supervision and general charges has been as follows: Any part of these costs which could be charged directly against a school or group of schools has been so charged. The remaining cost of administration, offices of superintendent, assistant superintendents, secretary, business agent and schoolhouse custodian have been apportioned to the several groups of schools in proportion to the number of teachers therein. For the purpose of this apportionment the number of teachers in the evening schools and summer review schools has been reduced to a basis which takes into consideration the amount of service rendered during the year as compared with that rendered by the teachers in the elementary day schools.

The method of apportioning the costs of the educational departments has been as follows: Any part of these costs which could be charged directly against a school or group of schools has been so charged; the balance of the costs of these departments has been apportioned in accordance with the method hereinafter described.

The costs of the departments of manual arts, music, practice and training and educational investigation and measurement have been apportioned to the several groups of schools in proportion to the number of teachers therein coming under the supervision of these several departments.

The cost of the department of evening schools has been divided as follows: Evening high schools, 40 per cent; evening elementary schools, 35 per cent; Boston trade school, evening classes, 5 per cent; day school for immigrants, 20 per cent.

The whole of the costs of the offices of director of kindergartens, director of household science and arts and director of special classes has been charged to the elementary schools.

The cost of the office of director of salesmanship has been apportioned three fourths to the high schools and one fourth to the compulsory continuation school.

The cost of vocational guidance has been apportioned to the high and elementary schools in proportion to the number of teachers therein.

The cost of attendance officers has been apportioned to the certificating office and the schools in proportion to the amount of service given to each.

The cost of the department of medical inspection after any items which could be charged directly were so charged has been apportioned as follows: The cost of the office of supervising nurse has been charged to elementary schools and the cost of the office of director of medical inspection has been apportioned to the several groups of schools in proportion to the number of teachers therein. The salary of the medical inspector has been charged to elementary schools.

The cost of the department of physical training after any items which could be charged directly were so charged has been apportioned as follows: The salary of the director of physical training has been apportioned to the several groups of schools and to the playgrounds in proportion to the estimated time required on each. The remaining costs of this department have been apportioned one-fourth to the playgrounds and the other three-fourths to the several groups of schools in proportion to the number of teachers therein.

The cost of supervision in connection with extended use of the public schools has been apportioned as follows: School centers, 92 per cent; use of school accommodations for municipal concerts, parents' meetings, etc., 8 per cent.

None of the cost of administration or the general account has been charged to playgrounds or the extended use of public schools.

This apportionment is, of course, to a certain extent arbitrary, but as these costs of administration and supervision are given in detail any other apportionment can easily be made.

APPORTIONMENT OF INCOME.

Any part of the income which could be directly credited to a school or group of schools has been so credited, and the balance has been apportioned in proportion to the number of teachers in each such school or group of schools.

The result is as follows:

Normal School	\$725 10
Latin and high schools	8,482 03
Elementary schools	23,930 44
Speech Improvement classes	80 04
Horace Mann School	29,121 14
Trade School for Girls, day and evening classes	39,823 40
Boston Trade School	23,356 68
Continuation School, Voluntary	817 59
Continuation School, Compulsory	32,668 91
Boston Clerical School	161 55
Boston Disciplinary Day School	26 68
Day School for Immigrants	26 68
Summer Review High School	26 68
Summer Review elementary schools	168 10
Boston Trade School, evening classes	4,935 00
Evening high schools	4,113 48
Evening elementary schools	6,626 09
Central Evening Elementary School	—
Summer Citizenship classes (evening)	—
Total income	<u>\$175,089 59</u>

No part of the income has been credited to the playgrounds or to the extended use of the public schools.

COST OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.

ADMINISTRATION.

SECRETARY.

Salary of the Secretary	\$4,740 00	
Salary of Assistant Secretary, from September 5, one fifth time	174 00	
Salary of chief clerk to September 4, 1918	1,262 80	
Salaries of clerks and stenographers (four on full time; two part time)	5,168 43	
Temporary clerical service	108 50	
Expert service on preparation of authorized list of books	75 00	
Books	8 20	
Office supplies and equipment	277 75	
Typewriters	148 50	
Printing and binding	174 10	
Telephone and telegraph	\$83 99	
Telephone switchboard charge	119 58	
	<hr/>	
	203 57	
Postage	699 31	
Boston Directory	6 00	
Car fares and incidentals	19 69	
	<hr/>	
		\$13,065 85
Credit:		
Typewriter taken in exchange		25 00
		<hr/>
Total		<u>\$13,040 85</u>

BUSINESS AGENT.

Salary of the Business Agent	\$4,740 00
Salary of chief accountant	2,880 00
Salaries of clerks and stenographers (fourteen)	15,463 00
Temporary clerical service	301 25
Salaries of supply room assistants (eight on full time and one to August 11, 1918)	10,449 00
Salaries of chauffeurs, automobile truck (one on full time, one from December 9, 1918)	1,306 73
Temporary and emergency assistance, supply room	1,117 50
Expert services on preparation of schedule of salaries for janitors	819 40
Account books	394 52
Surety bonds	70 00
	<hr/>
Carried forward	\$37,541 40

<i>Brought forward</i>	\$37,541 40	
Books and subscriptions	8 00	
Office supplies and equipment	453 12	
Telephone and telegraph (office)	\$158 53	
Telephone switchboard charge	119 58	
	<hr/>	278 11
Printing	442 22	
Postage	342 43	
Binding account books and certifications	106 32	
Boston Directory	6 00	
Traveling expenses of Business Agent	65 75	
Car and railroad fares, assistants	3 38	
Lunches for assistants	17 60	
Allowance for petty cash transactions	100 00	
Incidentals	31 15	
	<hr/>	\$39,395 48
Credits:		
Allowance for petty cash transactions expended	100 00	
	<hr/>	\$39,295 48
<i>Supply Room.</i>		
Equipment and supplies	\$332 82	
Car fares	37 21	
Expressage	430 42	
Telephone and telegraph	\$165 55	
Telephone switchboard charge	79 72	
	<hr/>	245 27
Printing	11 37	
Postage	43 32	
Office supplies and equipment	42 57	
Account books	—	
Binding record books	6 60	
Lunches for assistants	—	
Incidentals	6 71	
	<hr/>	1,156 29
<i>Automobile Truck.</i>		
Automobile truck, equipped complete *	\$3,800 00	
Tires and tire repairs (including inner tubes)	354 94	
Gasoline	194 52	
Lubricants	27 25	
Repairs and miscellaneous parts	188 93	
Registration fees	2 00	
Renewal of chauffeurs' licenses	6 00	
Oxygen	7 40	
Incidentals	82	
	<hr/>	4,581 86
Total		<u>\$45,033 63</u>

* The old automobile truck was sold for the sum of \$475, which is accounted for in the income for the year.

SCHOOLHOUSE CUSTODIAN.

Salary of Schoolhouse Custodian	\$3,000 00	
Salary of stenographer	982 50	
Salary of janitor, assigned	3 30	
Temporary clerical service	64 00	
Office supplies and equipment	69 99	
Printing	158 20	
Postage	172 50	
Telephone and telegraph	\$55 08	
Telephone switchboard charge	39 87	
	<hr/>	94 95
Car tickets	19 50	
Incidentals	8 35	
	<hr/>	\$4,573 29

Automobile.

One automobile runabout equipped complete, old automobile taken in exchange	\$985 80	
Tires and tire repairs (including inner tubes)	205 19	
Electric light	9 00	
Gasoline	166 06	
Lubricants	1 10	
Miscellaneous parts and repairs	196 86	
Incidentals	6 50	
	<hr/>	1,570 51
Total		<u><u>\$6,143 80</u></u>

SUPERINTENDENT.

Salary of Superintendent	\$9,999 98	
Salary of acting secretary to September 3, 1918	896 67	
Salary of assistant secretary from September 5, 1918, four fifths time	696 00	
Salaries of clerks and stenographers (seven full time, ten part time)	9,815 04	
Temporary clerical service	1,077 25	
Typewriters (2)	180 00	
Office supplies and equipment	560 16	
Printing	110 68	
Telephone and telegraph	\$178 65	
Telephone switchboard charge	279 04	
	<hr/>	457 69
Postage	318 85	
Boston Directory	6 00	
Traveling expenses	46 68	
Books	—	
	<hr/>	
Carried forward	\$24,165 00	

<i>Brought forward</i>	\$24,165 00	
Messenger service and telegrams	10 10	
Incidentals	7 21	
	<u>\$24,182 31</u>	
Credit: Typewriter taken in exchange	20 00	\$24,162 31
<i>Newsboys' Trial Board.</i>		
Salaries of judges	\$84 00	
Salary of clerk	28 00	
Printing	8 25	
	<u>120 25</u>	
Total		<u>\$24,282 56</u>

ASSISTANT SUPERINTENDENTS.

Salaries of Assistant Superintendents (four full time, one to August 31, 1918, and one from September 24, 1918)	\$27,101 39	
Salaries of stenographers (two part time)	1,768 67	
Office supplies and equipment	109 31	
Printing	65 19	
Telephone and telegraph	\$82 94	
Telephone switchboard charge	199 32	
	<u>282 26</u>	
Postage	119 75	
Assistance at teachers' examinations	1,119 50	
Supplies for examinations	27 20	
Materials for patriotic lectures	37 50	
Traveling expenses	279 22	
Books and magazine subscriptions	155 54	
Incidentals	49	
	<u>\$31,066 02</u>	
Total		

ADMINISTRATION ACCOUNT.

Mason Street Building:		
Salaries of janitors (one full time, one from July 15, 1918)	\$2,048 73	
Fuel	908 49	
Electric light	1,095 24	
Gas	70 67	
Janitors' supplies	82 75	
Towels	141 97	
Ice	28 25	
Supplies (stationery)	98 32	
Umbrella stands	6 00	
Incidentals	44 35	
	<u>\$4,524 77</u>	
Dartmouth Street:		
Salary of janitor	\$478 52	
Fuel	100 00	
	<u>\$578 52</u>	
<i>Carried forward</i>	\$578 52	\$4,524 77

<i>Brought forward</i>	\$578 52	\$4,524 77
Electric light	105 50	
Towels	37 92	
Janitors' supplies	8 13	
Ice	33 00	
	<hr/>	763 07
218 Tremont Street:		
Salary of janitor	\$661 72	
Electric light	153 01	
Janitors' supplies	17 79	
Towels	36 91	
Water cooler	26 40	
Ice	—	
Incidentals	—	
	<hr/>	895 83
801 City Hall Annex:		
Janitors' supplies	\$14 21	
Towels	42 90	
	<hr/>	57 11
School Committee:		
Stationery	\$3 83	
Postage	40 80	
Printing	6 00	
Books	—	
Telephone and telegraph	46 17	
Supplies	5 19	
Refreshments	404 35	
Incidentals	—	
	<hr/>	506 34
General Expense:		
Auditing accounts of Business Agent	\$850 00	
Advisory Committee on Music expenses	371 30	
Incidentals	13 90	
	<hr/>	1,235 20
Janitors' Trial Board:		
Attendance of janitor member at hearings	\$54 00	
Salary, clerical assistant	3 00	
	<hr/>	57 00
Printing:		
Minutes	\$2,613 21	
Index to minutes	655 16	
Binding minutes	84 00	
Binding documents	149 88	
Teachers' examinations	1,852 36	
Manuals	1,170 95	
Pay rolls	956 90	
Book labels	—	
Book receipts	—	
Bills and statements	91 23	
Normal School	6 50	
	<hr/>	
<i>Carried forward</i>	\$7,580 19	\$8,039 32

<i>Brought forward</i>	\$7,580 19	\$8,039 32
Normal, Latin and high schools	2,101 83	
Elementary schools	837 78	
Normal, high, elementary and industrial schools	29 00	
Summer Review High School	33 98	
Summer Review elementary schools	80 95	
Summer Review high and elementary schools	65 75	
Business Agent's report	1,102 37	
Superintendent's report	715 22	
Rules and Regulations	—	
Requisition books	573 61	
A schedule of compensation for janitors' service of school buildings	808 40	
Course of study in clerical practice	276 71	
Arithmetic, determining achievement of pupils in common fractions	268 05	
English, determining achievement of pupils in letter writing	155 71	
Arithmetic bulletin	365 34	
A plan for promotion of teachers	276 77	
Report of committee on economy on the distribution of books and supplies	67 28	
Syllabus for Grade I	83 76	
Syllabus for Grade III	368 12	
Syllabus for Grade IV	263 15	
Outline of work in English	40 14	
Special syllabus for shop work, Grades VI, VII, VIII, IX	129 34	
Courses in drawing and manual training	322 90	
Lists, eligible candidates	213 15	
Reappointment of teachers and members of the supervising staff	218 84	
Schedule of teachers' salaries	23 50	
Annual statistics	1,066 08	
Stock for printing	2,270 96	
Miscellaneous	27 20	
		20,366 08
Total		<u>\$28,405 40</u>

SUPERVISION OR PROFESSIONAL CONTROL.

DEPARTMENT OF PRACTICE AND TRAINING.

Salary of First Assistant Director	\$2,135 67
Salaries of Assistant Directors (four)	7,398 64
Salary of clerk	1,095 00
Office supplies and equipment	47 29
Printing	83 81
<i>Carried forward</i>	<u>\$10,760 41</u>

<i>Brought forward</i>	\$10,760 41	
Postage	59 00	
Telephone	\$83 99	
Telephone switchboard charge	39 86	
	<hr/>	123 85
Books and subscriptions	14 80	
	<hr/>	
Total		<u>\$10,958 06</u>

DEPARTMENT OF EDUCATIONAL INVESTIGATION AND MEASUREMENT.

Salaries and Office Expenditures.

Salary of Assistant Director of Promotion and Educational Measurement	\$2,407 93	
Salary of assistant, elementary schools, assigned	1,064 55	
Salaries of clerks (two on full time)	1,840 00	
Temporary clerical services	—	
Office supplies and equipment	123 23	
Postage	44 00	
Printing	16 25	
Telephone	\$15 75	
Telephone switchboard charge	39 87	
	<hr/>	55 62
Incidentals	3 13	
	<hr/>	\$5,554 71

Educational Measurement.

Printing	\$54 25	
Car tickets	—	
Telephone	30 24	
Supplies for tests	384 31	
Repairs to clocks	—	
Incidentals	16 95	
	<hr/>	485 75
Total		<u>\$6,040 46</u>

VOCATIONAL GUIDANCE.

Salary of Director	\$2,009 50	
Salaries of Vocational Assistants (one on full time, two on part time)	3,076 09	
Salaries of Temporary Vocational Assistants (two on part time)	1,472 25	
Salary of clerk	920 00	
Temporary clerical service	590 00	
Office supplies and equipment	131 36	
Printing	54 45	
Postage	205 50	
Telephone	175 77	
Car tickets	42 77	
Books and subscriptions	20 13	
	<hr/>	
<i>Carried forward</i>	\$8,697 82	

<i>Brought forward</i>	\$8,697 82
Incidentals	1 51
	<hr/>
Total	<u>\$8,699 33</u>

DEPARTMENT OF MANUAL ARTS.

Salary of Director of Manual Arts	\$3,460 00	
Salary of Associate Director of Manual Arts to September 23, 1918	1,139 60	
Salary of First Assistant Director from Septem- ber 24, 1918	727 50	
Salaries of Assistant Directors (one on full time, two on part time)	5,123 72	
Salaries of Assistants in Manual Arts (eight on full time, three on part time)	14,026 07	
Salaries of temporary teachers at Museum of Fine Arts	1,117 50	
Salaries of teachers assigned to special classes	579 97	
Salary of teacher, assigned, part time	71 80	
Salaries of teachers not otherwise charged	449 83	
Salaries of clerks (two)	1,743 00	
Temporary clerical service	314 75	
Office supplies and equipment	281 57	
Printing	69 40	
Postage	309 00	
Books and subscriptions	88 96	
Telephone	\$121 94	
Telephone switchboard charge	159 41	
	<hr/>	
	281 35	
Drawing supplies	116 20	
Manual training supplies	47 75	
Incidentals	3 26	
	<hr/>	
		\$29,951 23
Supplies for schools:		
Drawing supplies not otherwise charged	\$786 65	
Manual training supplies not otherwise charged	205 08	
Printing lists of visits	38 57	
Printing illustrations	—	
Manual training supplies not severally charged to schools	—	
Car tickets for pupils in prevocational centers	55 00	
Incidentals	10 50	
	<hr/>	
		1,095 80
Gardening:		
Salaries of Supervisors, Instructors and Assistants	\$5,145 50	
Supplies, equipment and incidentals	3,424 59	
	<hr/>	
		8,570 09
<i>Carried forward</i>		<u>\$39,617 12</u>

<i>Brought forward</i>		\$39,617 12
Credit:		
Manual Training supplies severally over-		
charged to schools	\$472 84	
Drawing supplies severally overcharged to		
schools	455 05	
		<u>927 89</u>
Total		<u>\$38,689 23</u>

DEPARTMENT OF MUSIC.

Salary of Director of Music	\$3,249 67	
Salaries of Assistant Directors (four)	10,226 64	
Salaries of Assistants (nine)	12,160 37	
Salary of clerk (one on part time)	262 88	
Office supplies	23 95	
Printing	67 51	
Postage	34 00	
Telephone	\$22 05	
Telephone switchboard charge	39 86	
		<u>61 91</u>
Services in connection with outside study of		
music by pupils	216 00	
Printing, outside study of music	—	
Books and subscriptions	13 50	
Incidentals	11 90	
		<u>\$26,328 33</u>
Tuning and care of pianos		1,620 00
Total		<u>\$27,948 33</u>

DIRECTOR OF KINDERGARTENS.

Salary of the Director of Kindergartens	\$2,417 07	
Salary of Assistant Director	1,562 40	
Salary of clerk (part time)	497 50	
Office supplies and equipment	32 74	
Books	8 04	
Printing	22 70	
Postage	99 50	
Telephone	\$13 65	
Telephone switchboard charge	19 92	
		<u>33 57</u>
Incidentals	2 12	
Total		<u>\$4,675 64</u>

DIRECTOR OF HOUSEHOLD SCIENCE AND ARTS.

Salary of the Director of Household Science		
and Arts	\$2,709 62	
Salary of Assistant Director	1,562 40	
<i>Carried forward</i>	\$4,272 02	

<i>Brought forward</i>	\$4,272 02	
Salary of clerk (on part time)	497 50	
Books and subscriptions	—	
Office supplies and equipment	12 90	
Printing	17 14	
Postage	137 00	
Telephone	\$14 70	
Telephone switchboard charge	19 94	
	<hr/>	34 64
Incidentals	—	
	<hr/>	
Total		<u>\$4,971 20</u>

DIRECTOR OF SPECIAL CLASSES.

Salary of the Director of Special Classes	\$2,020 00	
Salaries of clerks (two on part time)	358 10	
Books and subscriptions	13 13	
Office supplies and equipment	70 34	
Printing	61 32	
Postage	60 50	
Telephone	\$10 50	
Telephone switchboard charge	19 94	
	<hr/>	30 44
Car fares	29 00	
Incidentals	—	
	<hr/>	
Total		<u>\$2,642 83</u>

DIRECTOR OF SALESMANSHIP.

Salary of Director	\$2,020 00	
Salary of Assistant Instructor (assigned part time)	155 25	
Salaries of clerks (two on part time)	358 10	
Office supplies and equipment	24 75	
Printing	—	
Postage	37 50	
Books and subscriptions	16 70	
Telephone	\$29 39	
Telephone switchboard charge	19 94	
	<hr/>	49 33
Supplies for classes	20 90	
	<hr/>	
Total		<u>\$2,682 53</u>

DIRECTOR OF PENMANSHIP.

Salary of Director from September 10, 1918	\$617 90	
Office supplies and equipment	13 47	
Printing	12 50	
Incidentals	23	
	<hr/>	\$644 10

DEPARTMENT OF EVENING SCHOOLS.

Salary, Director of Evening Schools	\$3,377 00	
Salary of Supervisor of Division "C" Classes	156 00	
Salaries of clerks (two on full time, two on part time)	1,984 49	
Temporary clerical services	93 75	
Office supplies and equipment	118 32	
Typewriter	75 00	
Boston Directory	3 00	
Printing	27 25	
Postage	134 26	
Telephone and telegraph	\$45 14	
Telephone switchboard charge	119 58	
	<hr/>	164 72
Incidentals		39
		<hr/>
		\$6,134 18
For Evening Schools:		
Temporary clerical services	—	
Printing programs and tickets	\$177 07	
Printing, evening high schools	138 70	
Printing, evening elementary schools	113 30	
Printing, evening high and industrial schools	51 98	
Printing, evening elementary and industrial schools	39 91	
Printing, evening high and continuation schools	29 32	
Printing, evening school extension	—	
Printing for all evening schools	122 19	
Diplomas	155 48	
Supplies	—	
	<hr/>	827 95
Total		<hr/>
		<u>\$6,962 13</u>

DEPARTMENT OF PHYSICAL TRAINING.

	Physical Education Appropriation.	Regular Appropriation.
<i>Physical Training.</i>		
Salary of Director of Physical Training.....	\$3,100 00	
Salary of clerk.....	871 00	
Salaries of Supervisors of Playgrounds, assigned, part time.....	160 00	
Temporary clerical service.....	187 63	
Office supplies and equipment.....	77 79	\$60 67
Printing.....	81 24	
Postage.....	141 00	
Telephone and telegraph.....	\$34 65	
Telephone switchboard charge.....	19 94	
		54 59
Incidentals.....	15 29	
Car tickets.....	441 43	
Athletic certificates.....	349 68	
Badges, pins, etc., for physical tests.....	583 98	
Supplies for athletic meets.....	48 62	
Printing, playgrounds.....		8 00
Supplies not severally charged to schools and price adjustment.....	390 86	
Supplies not otherwise charged.....	27 05	
Military bands, use of tents, etc., annual parade.....	665 04	
Sub-totals.....	\$7,140 61	\$123 26
Total.....		\$7,263 87

DEPARTMENT OF MEDICAL INSPECTION.

	Medical Inspection Appropriation.	Nurses' Appropriation.	Regular Appropriation.
<i>Medical Inspection.</i>			
Salary of Director of Medical Inspection.....	\$2,536 00		—
Salary of Medical Inspector.....	2,044 00		—
Salaries of physicians assigned to certificating office.....	1,042 76		—
Salary of physician not otherwise charged.....	45 51		—
Carried forward.....	\$5,668 27		

DEPARTMENT OF MEDICAL INSPECTION.—*Concluded.*

	Medical Inspection Appropriation.	Nurses' Appropriation.	Regular Appropriation.
<i>Brought forward</i>	\$5,668 27		
Salary of clerk.....			\$920 00
Temporary clerical service.....	13 50		—
Office supplies.....	144 33		29 05
Books and subscriptions.....	—		—
Scales.....	42 90		
Supplies.....	34 73		—
Postage.....	51 00		—
Telephone..... \$35 69			
Telephone switchboard..... 39 87			75 56
Printing.....	116 61		
Incidentals.....	9 20		
	\$6,080 54		
Credit: Supplies severally overcharged to schools and price adjustment.....	17 67		
	\$6,062 87		
<i>Nurses.</i>			
Salary of Supervising Nurse to August 31, 1918.....		\$1,000 00	
Salary of Acting Supervising Nurse, part time.....		405 72	
Salary of nurse assigned to certificating office.....		—	
Office supplies and equipment.....		—	17 72
Books, etc.....		3 38	
Nurses' supplies.....		202 33	
Printing.....		65 09	
Nurses' time books.....		74 49	
Postage.....		71 00	
Telephone..... \$34 64			
Telephone switchboard charge..... 19 94			54 58
Car tickets.....		494 80	
Incidentals.....		4 25	
		\$2,321 06	
Credit: Nurses' supplies severally overcharged to schools and price adjustment.....		144 17	
Sub-totals.....	\$6,062 87	\$2,176 89	\$1,096 91
Total.....			\$9,336 67

GENERAL CHARGES.

ATTENDANCE OFFICERS.

Salary of Chief Attendance Officer	\$2,680 00	
Salaries of Attendance Officers (twenty-two)	32,398 55	
Salaries of Temporary Attendance Officers	2,352 00	
Salary of clerk	982 50	
Office supplies	22 14	
Printing	180 01	
Postage	181 50	
Telephone	\$16 80	
Telephone switchboard charge	19 94	
	<hr/>	36 74
Boston Business Directory	—	
Badges	—	
Car tickets	715 80	
Incidentals	90	
	<hr/>	39,550 14

Supervisor of Licensed Minors.

Salary of Supervisor of Licensed Minors, part time	\$1,008 00	
Salary of clerk	982 50	
Office supplies	10 02	
Telephone	\$16 80	
Telephone switchboard charge	19 93	
	<hr/>	36 73
Printing	2 25	
Postage	54 00	
Car tickets	47 00	
Badges and cards for licensed minors	107 25	
	<hr/>	2,307 75

Total	<u><u>\$41,857 89</u></u>
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GENERAL ACCOUNT.

Salary of City Treasurer, Custodian	\$1,124 99
Salaries of teachers	2,160 02
Sampling, testing and expert advice on coal	3,047 78
Premium on fuel	—
Storage of coal	689 94
Shrinkage in tonnage of coal, unloading barge	164 71
Advertising	269 74
Diplomas	2,103 98
Ribbon for diplomas	200 00
Supplies broken and lost in transit and at schools	16 25
Books and supplies sold out of stock	163 14
Supplies used as samples	8 31
Exhibits	111 50

Carried forward	<u>\$10,060 36</u>
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<i>Brought forward</i>	\$10,060 36
Penmanship material	1,064 69
Books and supplies received previous to year 1918-19, paid for year 1918-19	93 86
Supplies not severally charged to schools	195 19
Removing ashes	1,898 75
Tuition, wards of the city	7,253 85
Transportation, wards of the city	408 60
Tuition, paid town of Brookline	11,737 50
Tuition, paid town of Winthrop	—
Transportation, paid town of Winthrop	—
Tuition, paid town of Dedham	—
Tuition, paid Massachusetts Industrial Schools	69 25
Tuition, paid Massachusetts Agricultural Schools	494 85
Rebate on high school tuition	8 50
Rebate on elementary school tuition	—
Services of experts to the Business Agent on supplies, appa- ratus, etc.	448 00
Short postage	16 08
Conducting professional and cultural courses for teachers	1,524 88
Supplies for courses	—
License fee, qualification of assistant as Justice of Peace	7 00
Order of Court, payment to Mrs. Agnes C. White, Workmen's Compensation Act	520 00
Money paid to Women's Educational and Industrial Union owing to enforced inactivity of school lunch kitchens due to closing of schools	2,358 00
Miscellaneous telephone charges	—
Barrels, cans, etc.	113 00
Incidentals	5 00
	<hr/>
	\$38,277 36
Credits:	
Salaries of teachers overpaid and refunded	\$65 12
Discarded books	1,033 57
Barrels, cans, etc.	98 40
Adjustment on price of floor oil	34 54
Penalty exacted from contractors on account of quality of coal falling below standard requirements	—
Supplies severally overcharged to schools	2,792 41
	<hr/>
	4,024 04
Total	<u><u>\$34,253 32</u></u>

EXTENDED USE OF THE PUBLIC SCHOOLS.

	Extended Use of the Public Schools Appropriation.	Regular Appropriation.
Salary of Director, Extended Use of the Public Schools to August 31, 1918.	\$2,280 00	
Salary of Acting Director, Extended Use of the Public Schools from September 4, 1918.	600 00	
Salaries of clerks (2), part time.....	629 33	\$85 66
Salary of clerk, not otherwise charged.....	2 67	
Office supplies and equipment.....	4 80	21 91
Printing.....	68 72	
Postage.....	45 00	
Telephone and telegraph.....	\$47 24	
Telephone switchboard charge.....	39 87	
	87 11	
Messenger services.....	45	
Advertising.....	—	
Subscriptions.....	—	
Services and expenses, activities.....	28 00	
Slides, etc.....	5 95	
Incidentals.....	—	
Sub-totals.....	\$3,752 03	\$107 57
Total.....		\$3,859 60

SUMMARY — COSTS OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.

Secretary	\$13,040 85	
Business Agent	45,033 63	
Schoolhouse Custodian	6,143 80	
Superintendent	24,282 56	
Assistant Superintendents	31,066 02	
Administration account, other items	28,405 40	
		\$147,972 26
Department of Practice and Training	\$10,958 06	
Department of Educational Investigation and Measurement	6,040 46	
Vocational Guidance	8,699 33	
Department of Manual Arts	38,689 23	
Department of Music	27,948 33	
Director of Kindergartens	4,675 64	
Director of Household Science and Arts	4,971 20	
Director of Special Classes	2,642 83	
Director of Salesmanship	2,682 53	
Director of Penmanship	644 10	
Department of Evening Schools	6,962 13	
Department of Physical Training	7,263 87	
Department of Medical Inspection	9,336 67	
Attendance Officers *	41,857 89	
General account	34,253 32	
Extended Use of the Public Schools	3,859 60	
		211,485 19
Total cost of administration, supervision and general charges		<u>\$359,457 45</u>

* Including Supervisor of Licensed Minors.

APPORTIONMENT OF COSTS OF ADMINISTRATION, SUPERVISION AND
GENERAL CHARGES.

Normal School	\$1,803 58
Latin and high schools	56,235 53
Elementary schools	271,602 59
Horace Mann School	769 06
Trade School for Girls	2,551 85
Boston Trade School	1,446 69
Boston Clerical School	726 43
Boston Disciplinary Day School	599 71
Continuation School, Voluntary	194 18
Continuation School, Compulsory	5,429 81
Day School for Immigrants	1,495 01
Summer Review High School	251 04
Summer Review elementary schools	1,218 98
Speech Improvement classes	552 60
Evening high schools	3,497 12
Evening elementary schools	4,872 39
Boston Trade School, evening classes	611 89
Central Evening Elementary School *	—
Summer Citizenship Classes *	—
Park playgrounds	885 84
Schoolyard playgrounds	853 55
School centers	3,550 83
School accommodations	308 77
Total	<u>\$359,457 45</u>

TELEPHONE CHARGES.

All items of telephone costs which could be charged directly to the several offices have been so charged. In addition to such costs there is the cost of installation and operation of the switchboard. This is given in detail and includes the salaries of the operator and relief operator. The total cost of the switchboard is then apportioned to the several offices in proportion to the number of instruments connected to the switchboard.

TELEPHONE SWITCHBOARD.

Salary of operator	\$718 00
Salary of relief operator	304 71
Switchboard rental	15 53
Trunk lines	136 99
Carried forward	<u>\$1,175 23</u>

* Not in operation during the year 1918-19.

<i>Brought forward</i>	\$1,175 23
• Metallic circuits	266 90
Changing equipment	—
Telephone sets	159 00
Operators' sets	6 39
Toll calls	65 26
Incidentals	1 46

\$1,674 24

APPORTIONMENT OF COST OF SWITCHBOARD.

Secretary, $\frac{3}{4}$	\$119 58
Business Agent, $\frac{3}{4}$	119 58
Supply room, $\frac{2}{4}$	79 72
Schoolhouse Custodian, $\frac{1}{4}$	39 87
Superintendent, $\frac{7}{4}$	279 04
Assistant Superintendents, $\frac{5}{4}$	199 32
School Committee, $\frac{1}{4}$	39 87
Department of Practice and Training, $\frac{1}{4}$	39 86
Department of Educational Investigation and Measurement, $\frac{1}{4}$	39 87
Department of Manual Arts, $\frac{4}{4}$	159 41
Department of Music, $\frac{1}{4}$	39 86
Director of Salesmanship, $\frac{1}{84}$	19 94
Department of Evening Schools, $\frac{3}{4}$	119 58
Director of Household Science and Arts, $\frac{1}{84}$	19 94
Director of Kindergartens, $\frac{1}{84}$	19 92
Director of Special Classes, $\frac{1}{84}$	19 94
Department of Physical Training, $\frac{1}{84}$	19 94
Department of Medical Inspection, $\frac{3}{84}$	59 81
Attendance Officers, $\frac{1}{84}$	19 94
Supervisor of Licensed Minors, $\frac{1}{84}$	19 93
Director, Extended Use of the Public Schools, $\frac{1}{4}$	39 87
Continuation School, Compulsory, $\frac{4}{4}$	159 45

\$1,674 24

COST OF AUTOMOBILE TRUCK.

An automobile truck was purchased in January, 1912, and was in use six years, seven months and fourteen days, It was sold for \$500 when a new machine was recently purchased. The following statement shows the total cost, the average yearly cost, including depreciation, the depreciation per year and the cost per mile:

Original cost of truck, equipped complete	\$3,330 00
Tires and tire repairs (including inner tubes)	2,799 55
Gasolene	1,257 83
Lubricants	236 23
<i>Carried forward</i>	\$7,623 61

<i>Brought forward</i>	\$7,623 61
Miscellaneous parts and repairs (including overhauling and painting)	2,825 32
Oxygen, including Ozo outfit	28 90
Registration fees	40 00
Licenses for chauffeurs	32 50
Incidentals	72 56
Robes	12 00
Garage charges	636 72
Instruction to drivers	57 00
Total cost for six years, seven months, fourteen days	\$11,328 61
Realized from sale	500 00
Net cost, including depreciation	<u>\$10,828 61</u>

Length of time in service, six years, seven months, fourteen days.

Average cost per year, including depreciation, \$1,635.19.

Total miles run, 75,880.

Depreciation per year, 12.8 per cent.

Cost per mile, \$0.1427.

COST OF SCHOOLHOUSE CUSTODIAN'S AUTOMOBILE.

An automobile (roadster) was purchased in December, 1914, and was in use three years, nine months and nine days. It has recently been exchanged for a new machine. The following statement shows the total cost, the average yearly cost, including depreciation, the depreciation per year and the cost per mile:

Original cost, equipped complete	\$1,085 00
Tires and tire repairs (including inner tubes)	532 91
Gasolene	488 97
Lubricants	29 00
Miscellaneous parts and repairs (including overhauling, etc.)	641 84
Oxygen	22 62
Washing and polishing	27 25
Registration fees	30 00
Licenses	2 50
Incidentals	33 56
Garage charges	3 75
Electric light for garage	36 75
Total cost for three years, nine months, nine days	\$2,934 15
Allowance for old machine	250 00
Net cost, including depreciation	<u>\$2,684 15</u>

Length of time in service, three years, nine months, nine days.

Total miles run, 31,000.

Average cost per year, including depreciation, \$711.03.

Depreciation per year, 20.3 per cent.

Cost per mile, \$0.087.

STOCK BALANCE, 1918-1919.

1918-19, STOCK BALANCE.

Debit.

Inventory of December 4, 1917:

Books	\$16,494 50	
Manual training supplies	2,786 17	
Drawing supplies	1,555 31	
Kindergarten supplies	2,732 57	
Janitors' supplies	4,438 47	
Miscellaneous educational supplies	36,021 71	
Laboratory supplies	12 50	
Nurses' supplies	870 37	
Physical education supplies	1,810 49	
Supplies for the extended use of the public schools	62 35	
Supplies for medical inspection	479 37	
Fuel (at wharf, paid for but not delivered)	2,581 51	
		\$69,845 32

Receipts, 1918-19:

Purchases:

Books	\$18,346 36	
Manual training supplies	5,078 47	
Drawing supplies	3,247 86	
Kindergarten supplies	2,369 68	
Janitors' supplies	12,737 23	
Miscellaneous educational supplies	84,585 93	
Nurses' supplies	905 35	
Physical education supplies	6,244 80	
Supplies for the extended use of the public schools	50 00	
Supplies for medical inspection	176 40	
Fuel	53,218 57	
		186,960 65

From schools:

Books	\$429 48	
Manual training supplies	337 06	
Drawing supplies	65 03	
Kindergarten supplies	4 80	
Janitors' supplies	7 00	
Miscellaneous educational supplies	230 77	
Physical education supplies	212 15	
Supplies for medical inspection	1 50	
		1,287 79

Manual training supplies overcharged to schools	\$472 84	
Drawing supplies overcharged to schools	455 05	
Kindergarten supplies overcharged to schools	132 00	
Janitor's supplies overcharged to schools	188 32	
Books and miscellaneous supplies overcharged to schools	2,276 90	
Nurses' supplies overcharged to schools	144 17	
Supplies for medical inspection overcharged to schools	17 67	
		3,686 95
Discarded books		1,033 57

Total \$262,814 28

NOTE.—The items included in the above account are only those purchased for general distribution and do not include those purchased for any particular school. The latter are charged direct to the school.

1918-19, STOCK BALANCE.

Credit.

Deliveries on Requisition:

Books	\$24,978 93	
Manual training supplies	4,760 38	
Drawing supplies	3,654 05	
Kindergarten supplies	3,205 02	
Janitors' supplies	11,857 32	
Miscellaneous educational supplies	80,245 97	
Laboratory supplies	—	
Nurses' supplies	928 38	
Physical education supplies	4,288 24	
Supplies for the extended use of the public schools	45 00	
Supplies for medical inspection	416 58	
Fuel	7,250 99	
	<hr/>	\$141,630 86
Physical education supplies not severally charged to schools		390 86
Discarded books		1,033 57
Physical education supplies not inventoried, 1917		95 83
Inventory of December 1, 1918:		
Books	\$11,311 73	
Manual training supplies	3,914 16	
Drawing supplies	1,669 20	
Kindergarten supplies	2,034 03	
Janitors' supplies	5,513 70	
Miscellaneous educational supplies	41,849 02	
Laboratory supplies	12 50	
Nurses' supplies	991 51	
Physical education supplies	3,492 51	
Supplies for the extended use of the public schools	67 35	
Supplies for medical inspection	258 36	
Fuel (at wharf, paid for but not delivered)	48,549 09	
	<hr/>	119,663 16
Total		<u>\$262,814 28</u>

NOTE.—The items included in the above account are only those purchased for general distribution and do not include those purchased for any particular school. The latter are charged direct to the school.

SUMMARY COSTS OF SCHOOLS.

	Costs Exclusive of Administration, Supervision and General Charges.	Costs with Costs of Administration, Supervision and General Charges Added.	Costs with Proportionate Part of Income Deducted.
Normal School.....	\$48,082 16	\$49,885 74	\$49,160 64
Latin and high schools.....	1,340,428 89	1,396,664 42	1,388,182 39
Elementary schools.....	3,899,394 67	4,170,997 26	4,147,066 82
Speech Improvement classes.....	11,940 32	12,492 92	12,412 88
Horace Mann School.....	29,983 44	30,752 50	1,631 36
Trade School for Girls.....	62,231 99	64,783 84	24,960 44
Boston Trade School.....	46,852 20	48,298 89	24,942 21
Continuation School, Voluntary.....	442 71	636 89	Cr. † 180 70
Continuation School, Compulsory.....	79,999 29	85,429 10	52,760 19
Boston Clerical School.....	17,079 69	17,806 12	17,644 57
Boston Disciplinary Day School.....	2,191 93	2,791 64	2,764 96
Day School for Immigrants.....	3,991 43	5,486 44	5,459 76
Summer Review High School.....	3,214 98	3,466 02	3,439 34
Summer Review elementary schools.....	14,751 88	15,970 86	15,802 76
Evening high schools.....	29,725 80	33,222 92	29,109 44
Evening elementary schools.....	25,218 16	30,090 55	23,464 46
Boston Trade School, evening classes.....	6,355 19	6,967 08	2,032 08
Park playgrounds.....	20,218 53	21,104 37	21,104 37
Schoolyard playgrounds.....	15,616 17	16,469 72	16,469 72
Farm service.....	49 70	49 70	49 70
Extended use of the public schools:			
School centers.....	18,782 35	22,333 18	22,333 18
Use of school accommodations.....	2,272 37	2,581 14	2,581 14
Totals.....	\$5,678,823 85	\$6,038,281 30	\$5,863,191 71
Add costs of administration, supervision and general charges.....	359,457 45		
Total cost.....	\$6,038,281 30		
Deduct total income.....	175,089 59		
Net total.....	\$5,863,191 71		
Total cost brought down.....	\$6,038,281 30		
Increase in inventory.....	49,817 84		
Total expenditures, 1918-19 *.....	\$6,088,099 14		

* Exclusive of pensions, cost of buildings, depreciation, repairs, interest and sinking fund charges.

† Amount by which income exceeds total cost.

COMPARISON OF COSTS, 1917-18 AND 1918-19.

	Total Cost, 1918-19.	Total Cost, 1917-18.	Increases.
Normal School.....	\$49,885 74	\$46,518 10	\$3,367 64
Latin and high schools.....	1,396,664 42	1,388,748 57	7,915 85
Elementary schools.....	4,170,997 26	3,881,808 94	289,188 32
Speech Improvement classes.....	12,492 92	7,451 35	5,041 57
Horace Mann School.....	30,752 50	30,597 21	155 29
Trade School for Girls †.....	64,783 84	68,183 89	* 3,400 05
Boston Trade School.....	48,298 89	46,113 34	2,185 55
Continuation School, Voluntary.....	636 89	1,055 83	* 418 94
Continuation School, Compulsory.....	85,429 10	67,777 84	17,651 26
Boston Clerical School.....	17,806 12	13,877 63	3,928 49
Boston Disciplinary Day School.....	2,791 64	2,829 36	* 37 72
Day School for Immigrants.....	5,486 44	5,205 42	281 02
Summer Review High School.....	3,466 02	3,002 02	464 00
Summer Review elementary schools.....	15,970 86	16,266 77	* 295 91
Evening high schools.....	33,222 92	54,904 50	* 21,681 58
Evening elementary schools.....	30,090 55	61,949 20	* 31,858 65
Central Evening Elementary School ‡.....		1,469 20	* 1,469 20
Summer Citizenship classes ‡.....		845 65	* 845 65
Boston Trade School, evening classes.....	6,967 08	10,687 01	* 3,719 93
Park playgrounds.....	21,104 37	20,291 13	813 24
Schoolyard playgrounds.....	16,469 72	17,519 01	* 1,049 29
Farm service ‡.....	49 70	1,636 12	* 1,586 42
Extended use of the public schools:			
School centers.....	22,333 18	28,197 77	* 5,864 59
Lectures ‡.....		1,608 90	* 1,608 90
Use of school accommodations.....	2,581 14	3,209 51	* 628 37
Totals.....	\$6,038,281 30	\$5,781,754 27	\$256,527 03

* Decreases.

† Including Trade Extension Classes.

‡ Not in operation in 1918-19.

TABLE SHOWING COSTS OF ADMINISTRATION FOR THE YEARS 1911-12 AND 1918-19,
AND THE INCREASES IN SEVEN YEARS.

	1911-12.	1918-19.	Increases in Seven Years.	Increases in Seven Years, Per Cent.
Secretary.....	\$10,326 66	\$13,040 85	\$2,714 19	26.2
Business Agent*.....	†36,127 57	45,033 63	8,906 06	24.6
Schoolhouse Custodian.....	4,356 93	6,143 80	1,786 87	41.0
Superintendent.....	16,880 65	24,282 56	7,401 91	43.8
Assistant Superintendents.....	30,900 31	31,066 02	165 71	.5
Administration Account, Other Items.....	16,725 58	28,405 40	11,679 82	69.8
Totals.....	\$115,317 70	\$147,972 26	\$32,654 56	28.3

* Duties of Auditor transferred to Business Agent October 14, 1912.

† Including Auditor.

TABLE SHOWING COSTS OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS
1911-12 AND 1918-19, AND THE INCREASES IN SEVEN YEARS.

	1911-12.	1918-19.	Increases in Seven Years.	Increases in Seven Years, Per Cent.
Department of Practice and Training.....	*\$5,556 96	\$10,958 06	\$5,401 10	97.1
Department of Educational Investigation and Measurement.....		6,040 46	6,040 46	.....
Vocational Guidance.....	1,986 05	8,699 33	6,713 28	338.0
Department of Manual Arts.....	15,422 03	38,689 23	23,267 20	150.8
Department of Music.....	19,802 72	27,948 33	8,145 61	41.1
Director of Kindergartens.....	1,934 78	4,675 64	2,740 86	141.6
Director of Household Science and Arts.....	2,269 72	4,971 20	2,701 48	119.0
Director of Special Classes.....		2,642 83	2,642 83	.....
Director of Salesmanship.....		2,682 53	2,682 53	.....
Director of Penmanship.....		644 10	644 10	.....
Department of Evening Schools.....	4,971 19	6,962 13	1,990 94	40.0
Department of Physical Training.....	19,396 77	7,263 87	† 2,796 23	† 14.4
Department of Medical Inspection.....		9,336 67		
Totals.....	\$71,340 22	\$131,514 38	\$60,174 16	84.3

* Supervisor of Substitutes.

† Decrease.

STATISTICS, 1911-12 AND 1918-19.

	1911-12.	1918-19.	Increases in Seven Years.	Increases in Seven Years, Per Cent.
Total expenditures*.....	*\$4,277,938 30	\$6,181,596 72	\$1,903,658 42	44.4
Day Schools:				
Average membership.....	99,272	102,725	3,453	3.4
Average attendance.....	91,049	92,515	1,466	1.6
Summer Schools:				
Average attendance.....	209	4,350	4,141	1,981.3
Evening Schools:				
Average attendance.....	7,964	4,191	† 3,773	† 47.3
Evening School Extension:				
Average attendance.....	716			
Playgrounds:				
Average attendance.....	7,391	10,900	3,509	47.4

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools.

† Decrease.

TABLE SHOWING COSTS OF ADMINISTRATION FOR THE YEARS 1908-09 AND 1918-19, AND THE INCREASES IN TEN YEARS.

	1908-09.	1918-19.	Increases in Ten Years.	Increases in Ten Years, Per Cent.
Secretary.....	\$8,124 73	\$13,040 85	\$4,916 12	60.5
Business Agent *.....	† 24,112 92	45,033 63	20,920 71	86.7
Schoolhouse Custodian.....	3,011 74	6,143 80	3,132 06	103.9
Superintendent.....	13,240 53	24,282 56	11,042 03	83.3
Assistant Superintendents.....	28,812 84	31,066 02	2,253 18	7.8
Administration Account, Other Items.....	13,454 54	28,405 40	14,950 86	111.1
Totals.....	\$90,757 30	\$147,972 26	\$57,214 96	63.0

* Duties of Auditor transferred to Business Agent October 14, 1912.

† Including Auditor.

TABLE SHOWING COSTS OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS 1908-09 AND 1918-19, AND THE INCREASES IN TEN YEARS.

	1908-09.	1918-19.	Increases in Ten Years.	Increases in Ten Years, Per Cent.
Department of Practice and Training.....	* \$3,192 79	\$10,958 06	\$7,765 27	243.2
Department of Educational Investigation and Measurement.....		6,040 46	6,040 46	
Vocational Guidance.....		8,699 33	8,699 33	
Department of Manual Arts.....	13,510 37	38,689 23	25,178 86	186.3
Department of Music.....	19,331 20	27,948 33	8,617 13	44.5
Director of Kindergartens.....	1,807 81	4,675 64	2,867 83	158.6
Director of Household Science and Arts.....	1,486 51	4,971 20	3,484 69	234.4
Director of Special Classes.....		2,642 83	2,642 83	
Director of Salesmanship.....		2,682 53	2,682 53	
Director of Penmanship.....		644 10	644 10	
Department of Evening Schools.....	3,050 46	6,962 13	3,911 67	128.2
Department of Physical Training.....	16,878 34	7,263 87		
Department of Medical Inspection.....		9,336 67	† 1277 80	† 1.6
Totals.....	\$59,257 48	\$131,514 38	\$72,256 90	121.9

* Supervisor of Substitutes.

† Decrease.

STATISTICS, 1908-09 AND 1918-19.

	1908-09.	1918-19.	Increases in Ten Years.	Increases in Ten Years, Per Cent.
Total expenditures *.....	*\$3,621,304 48	\$6,181,596 72	\$2,560,292 24	70.7
Day Schools:				
Average membership.....	96,925	102,725	5,800	5.9
Average attendance.....	88,475	92,515	4,040	4.5
Summer Schools:				
Average attendance.....		4,350		
Evening Schools:				
Average attendance.....	7,778	4,191	† 3,587	† 46.1
Evening School Extension:				
Average attendance.....	—	—		
Playgrounds:				
Average attendance.....	12,264	10,900	† 1,364	† 11.1

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools.

† Decrease.

TABLE SHOWING TOTAL COSTS * AND PER CAPITA COSTS * FOR FIVE YEARS AND THE INCREASES IN FOUR YEARS.

	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	Increases in Four Years.
Normal.....	Total cost..... Average membership..... Per capita cost, total.....	\$39,433 19 186 \$212 01	\$42,684 98 226 \$188 87	\$44,230 72 290 \$152 52	\$46,518 10 281 \$165 54	\$10,452 55 57 1 \$6 72
Latin and high schools.....	Total cost..... Average membership..... Per capita cost, total.....	\$1,195,708 12 14,912 \$80 12	\$1,286,326 86 46,301 \$78 91	\$1,327,765 43 16,754 \$79 25	\$1,396,664 42 14,980 \$83 24	\$200,956 30 68 1 \$13 12
Elementary schools.....	Total cost..... Average membership..... Per capita cost, total.....	\$3,605,309 87 92,092 \$39 15	\$3,682,303 53 92,803 \$39 53	\$3,681,184 92 91,306 \$40 32	\$3,881,808 94 91,294 \$42 52	\$565,687 39 14,688 1 \$8 57
Speech Improvement classes.....	Total cost..... Average attendance..... Per capita cost, total.....	\$4,044 09	\$4,631 02	\$5,839 33	\$7,451 35	\$8,448 83
Horace Mann School.....	Total cost..... Average membership..... Per capita cost, total.....	\$30,002 56 140 \$214 30	\$30,410 01 135 \$225 26	\$29,752 82 129 \$230 64	\$30,597 21 137 \$223 34	\$749 94 13 1 \$10 17
Trade School for Girls.....	Total cost..... Average membership..... Per capita cost, total.....	\$58,430 51	\$65,645 81 4,606,503 \$0 108	\$69,265 83 4,514,711 \$0 134	\$68,183 89 4,377,020 \$0 18	\$6,353 33
Boston Trade School.....	Total cost..... Average membership..... Per capita cost, total.....	\$31,095 62 4,226,370 \$185 09	\$36,060 81 4,226,370 \$0 159	\$37,517 68 166 \$226 01	\$46,113 34 167 \$276 13	\$17,203 27 28 1 \$61 33
Boston Disciplinary Day School.....	Total cost..... Average membership..... Per capita cost, total.....	2 2 2	\$3,089 41 25 \$123 48	\$2,631 91 15 \$175 46	\$2,829 36 17 \$166 43	\$2,791 64 14 1 \$199 40
Continuation School, Voluntary.....	Total cost..... Number of pupil hours..... Cost per pupil hour.....	\$9,628 31 93,160 4 \$0 103	\$5,736 63 59,230 \$0 096	\$5,649 27 55,941 \$0 100	\$636 89 4,527 \$0 233	1 \$8,991 42 191,146 4 \$0 213

Continuation School, Compulsory.....	Total cost.....	\$17,019 84	\$44,912 78	\$51,815 93	\$67,777 84	\$85,429 10	\$68,409 26
	Number of pupil hours.....	18,446	262,182	354,746	603,650	562,092	543,646
	Cost per pupil hour.....	\$0 92	\$0 171	\$0 146	\$0 112	\$0 151	\$0 769
Boston Clerical School.....	Total cost.....	\$4,136 70	\$8,589 75	\$9,824 01	\$13,877 63	\$17,806 12	\$13,669 42
	Average membership.....	34	100	124	192	189	155
	Per capita cost, total.....	\$121 67	\$85 90	\$79 23	\$72 28	\$94 21	\$127 46
Summer Review High School.....	Total cost.....	\$3,323 31	\$3,752 54	\$3,298 95	\$3,002 02	\$3,466 02	\$142 71
	Average attendance.....	396	454	395	268	294	102
	Per capita cost, total.....	\$8 40	\$83 27	\$8 35	\$11 20	\$11 79	\$3 39
	Per capita cost, per session.....	\$0 20	\$0 051	\$0 052	\$0 07	\$0 073	.....
Summer Review elementary schools	Total cost.....	\$14,262 94	\$19,608 88	\$16,106 44	\$16,266 77	\$15,970 86	\$1,707 92
	Average attendance.....	3,531	4,741	4,245	4,073	4,056	525
	Per capita cost, total.....	\$4 04	\$4 14	\$3 79	\$3 99	\$3 94	\$0 10
	Per capita cost, per session.....	\$0 096	\$0 034	\$0 031	\$0 033	\$0 032	.....
Day School for Immigrants.....	Total cost.....	?	?	?	\$5,205 42	\$5,486 44	\$5,486 44
	Number of pupil hours.....	?	?	?	46,634	28,724	28,724
	Cost per pupil hour.....	?	?	?	\$0 111	\$0 191	\$0 191
Evening high schools.....	Total cost.....	\$62,900 98	\$54,788 39	\$53,003 99	\$54,904 50	\$33,222 92	\$29,678 06
	Average attendance.....	3,323	3,344	3,054	3,014	2,250	11,073
	Per capita cost, total.....	\$18 93	\$16 38	\$17 36	\$18 22	\$14 76	\$4 17
	Per capita cost, per session.....	\$0 289	\$0 12	\$0 127	\$0 133	\$0 167	.....
Evening elementary schools.....	Total cost.....	\$115,730 98	\$100,054 81	\$79,872 19	\$61,949 20	\$30,090 55	\$85,640 43
	Average attendance.....	6,494	5,612	3,697	2,842	1,511	14,983
	Per capita cost, total.....	\$17 82	\$17 83	\$21 60	\$21 80	\$19 91	\$2 09
	Per capita cost, per session.....	\$0 208	\$0 103	\$0 121	\$0 129	\$0 179	.....

¹ Decrease.² Not in operation.³ Includes day and evening classes.⁴ Number of pupil hours.⁵ Cost per pupil per hour.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

PER CAPITA COSTS OF TEACHERS' SALARIES, BOOKS, OTHER EDUCATIONAL
SUPPLIES, ALL EDUCATIONAL SUPPLIES AND INCIDENTALS
AND TOTAL FOR INSTRUCTION, BASED ON
AVERAGE ATTENDANCE.

Normal School.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Normal.....	\$157 36	\$4 24	\$6 12	\$10 36	\$167 72

Latin and High Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Public Latin.....	\$85 70	\$1 88	\$1 59	\$3 47	\$89 17
Girls' Latin.....	67 60	1 74	1 80	3 54	71 14
Brighton High.....	66 64	2 24	3 37	5 61	72 25
Charlestown High.....	81 44	1 04	6 59	7 63	89 07
Dorchester High.....	65 89	1 76	1 94	3 70	69 59
East Boston High.....	81 49	2 05	4 68	6 73	88 22
English High.....	85 84	1 26	2 65	3 91	89 75
Girls' High.....	65 04	1 49	2 19	3 68	68 72
High School of Commerce.....	84 34	81	3 86	4 67	89 01
High School of Practical Arts...	128 31	98	3 95	4 93	133 24
Hyde Park High.....	67 08	2 42	4 32	6 74	73 82
Mechanic Arts High.....	165 29	40	8 06	8 46	173 75
Roxbury High.....	55 82	1 59	1 66	3 25	59 07
South Boston High.....	66 94	1 37	2 97	4 34	71 28
West Roxbury High.....	73 36	1 55	3 03	4 58	77 94
Averages.....	\$79 46	\$1 49	\$3 09	\$4 58	\$84 04

* Exclusive of physical education.

Elementary Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Abraham Lincoln.....	\$38 84	\$0 58	\$1 17	\$1 75	\$40 59
Agassiz.....	51 00	54	1 42	1 96	52 96
Bennett.....	37 08	60	1 23	1 83	38 91
Bigelow.....	48 30	58	1 79	2 37	50 67
Bowditch.....	39 69	36	1 17	1 53	41 22
Bowdoin.....	41 69	49	1 14	1 63	43 32
Bunker Hill.....	49 83	25	1 40	1 65	51 48
Chapman.....	42 01	74	1 27	2 01	44 02
Charles Sumner.....	41 48	68	1 15	1 83	43 31
Christopher Gibson.....	39 04	55	1 32	1 87	40 91
Dearborn.....	41 62	63	1 27	1 90	43 52
Dillaway.....	45 72	38	1 66	2 04	47 76
Dudley.....	47 28	48	2 20	2 68	49 96
Dwight.....	50 83	20	2 21	2 41	53 24
Edmund P. Tileston.....	37 99	54	2 00	2 54	40 53
Edward Everett.....	34 58	40	1 17	1 57	36 15
Elihu Greenwood.....	35 25	49	1 40	1 89	37 14
Eliot.....	35 98	47	87	1 34	37 32
Emerson.....	37 92	64	1 27	1 91	39 83
Everett.....	44 62	36	1 13	1 49	46 11
Francis Parkman.....	40 32	51	1 39	1 90	42 22
Franklin.....	41 28	56	1 21	1 77	43 05
Frederic W. Lincoln.....	46 73	39	1 45	1 84	48 57
Gaston.....	38 56	58	1 00	1 58	40 14
George Putnam.....	35 00	76	1 88	2 64	37 64
Gilbert Stuart.....	39 57	80	1 53	2 33	41 90
Hancock.....	38 00	68	1 03	1 71	39 71
Harvard-Frothingham.....	49 97	60	1 72	2 32	52 29
Henry Grew.....	40 18	40	1 71	2 11	42 29
Henry L. Pierce.....	37 22	60	1 58	2 18	39 40

* Exclusive of physical education.

Elementary Schools.—Continued.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Hugh O'Brien.....	\$37 12	\$0 53	\$1 40	\$1 93	\$39 05
Hyde.....	50 11	49	1 16	1 65	51 76
Jefferson.....	41 52	37	1 44	1 81	43 33
John A. Andrew.....	42 95	54	1 34	1 88	44 83
John Cheverus.....	40 80	46	1 46	1 92	42 72
John Winthrop.....	36 60	77	1 19	1 96	38 56
Lawrence.....	45 74	74	2 65	3 39	49 13
Lewis.....	33 27	71	1 16	1 87	35 14
Longfellow.....	34 47	67	1 39	2 06	36 53
Lowell.....	40 82	57	1 49	2 06	42 88
Martin.....	49 22	75	1 47	2 22	51 44
Mary Hemenway.....	33 23	64	1 60	2 24	35 47
Mather.....	36 87	56	1 67	2 23	39 10
Minot.....	39 00	42	1 50	1 92	40 92
Norcross.....	43 23	56	1 09	1 65	44 88
Oliver Hazard Perry.....	42 15	68	1 49	2 17	44 32
Oliver Wendell Holmes.....	34 70	53	1 38	1 91	36 61
Phillips Brooks.....	34 35	37	1 35	1 72	36 07
Prescott.....	51 70	56	2 24	2 80	54 50
Prince.....	41 08	51	1 21	1 72	42 80
Quincy.....	49 54	63	1 49	2 12	51 66
Rice.....	41 99	28	1 92	2 20	44 19
Robert G. Shaw.....	34 51	85	1 57	2 42	36 93
Roger Wolcott.....	31 52	72	1 29	2 01	33 53
Samuel Adams.....	32 87	34	1 33	1 67	34 54
Sherwin.....	57 18	72	2 63	3 35	60 53
Shurtleff.....	37 75	34	1 13	1 47	39 22
Theodore Lyman.....	38 23	43	1 33	1 76	39 99
Thomas Gardner.....	37 64	58	1 26	1 84	39 48
Thomas N. Hart.....	43 07	45	1 31	1 76	44 83
Ulysses S. Grant.....	38 82	60	1 46	2 06	40 88
Warren.....	39 40	60	1 01	1 61	41 01

* Exclusive of physical education.

Elementary Schools.—Concluded.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Washington.....	\$38 76	\$0 27	\$1 48	\$1 75	\$40 51
Washington Allston.....	38 75	50	1 42	1 92	40 67
Wells.....	38 80	28	97	1 25	40 05
Wendell Phillips.....	42 83	79	1 51	2 30	45 13
William E. Russell.....	44 38	40	1 21	1 61	45 99
Averages.....	\$39 44	\$0 55	\$1 40	\$1 95	\$41 39

* Exclusive of physical education.

Special Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Horace Mann.....	\$196 99	\$0 46	\$4 69	\$5 15	\$202 14
Boston Clerical.....	79 30	1 97	11 97	13 94	93 24
Boston Disciplinary Day.....	144 58	.....	5 14	5 14	149 72
Boston Trade.....	190 49	1 80	26 84	28 64	219 13

* Exclusive of physical education.

PER CAPITA COSTS OF JANITORS' SUPPLIES BASED ON AVERAGE
ATTENDANCE.

Normal School.

SCHOOL.	Janitors' Supplies.
Normal.....	\$0 37

Latin and High Schools.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Public Latin.....	\$0 14	High School of Commerce.....	\$0 17
Girls' Latin.....	14	High School of Practical Arts..	58
Brighton High.....	29	Hyde Park High.....	28
Charlestown High.....	17	Mechanic Arts High.....	28
Dorchester High.....	16	Roxbury High.....	11
East Boston High.....	20	South Boston High.....	18
English High.....	11	West Roxbury High.....	16
Girls' High.....	18	Average.....	18

Elementary Schools.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Abraham Lincoln.....	\$0 10	Dudley.....	\$0 29
Agassiz.....	11	Dwight.....	16
Bennett.....	14	Edmund P. Tileston.....	03
Bigelow.....	16	Edward Everett.....	21
Bowditch.....	22	Elihu Greenwood.....	13
Bowdoin.....	12	Eliot.....	08
Bunker Hill.....	14	Emerson.....	16
Chapman.....	15	Everett.....	23
Charles Sumner.....	19	Francis Parkman.....	20
Christopher Gibson.....	05	Franklin.....	11
Dearborn.....	12	Frederic W. Lincoln.....	15
Dillaway.....	13	.....	.....

PER CAPITA COSTS OF JANITORS' SUPPLIES BASED ON AVERAGE
ATTENDANCE.— *Concluded.*

Elementary Schools.— Concluded.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Gaston.....	\$0 07	Oliver Wendell Holmes.....	\$0 13
George Putnam.....	14	Phillips Brooks.....	11
Gilbert Stuart.....	14	Prescott.....	16
Hancock.....	10	Prince.....	12
Harvard-Frothingham.....	13	Quincy.....	18
Henry Grew.....	13	Rice.....	15
Henry L. Pierce.....	27	Robert G. Shaw.....	22
Hugh O'Brien.....	14	Roger Wolcott.....	15
Hyde.....	13	Samuel Adams.....	10
Jefferson.....	13	Sherwin.....	32
John A. Andrew.....	20	Shurtleff.....	09
John Cheverus.....	17	Theodore Lyman.....	20
John Winthrop.....	11	Thomas Gardner.....	09
Lawrence.....	24	Thomas N. Hart.....	16
Lewis.....	15	Ulysses S. Grant.....	11
Longfellow.....	17	Warren.....	24
Lowell.....	17	Washington.....	18
Martin.....	18	Washington Allston.....	06
Mary Hemenway.....	28	Wells.....	11
Mather.....	13	Wendell Phillips.....	16
Minot.....	15	William E. Russell.....	10
Norcross.....	19		
Oliver Hazard Perry.....	19	Average.....	\$0 15

Special Schools.

SCHOOLS.	Janitors' Supplies.
Horace Mann.....	\$0 37
Boston Clerical.....	09
Boston Disciplinary Day.....	57
Boston Trade.....	95

**STANDARD REPORT ON THE FINANCIAL
STATISTICS OF THE PUBLIC SCHOOLS.**

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.*

A. PAYMENTS.

1.— EXPENSES (Cost of Conducting School System).	Total.	Salaries.	Other Objects.
EXPENSES OF GENERAL CONTROL (OVERHEAD CHARGES).			
1. Board of Education and Secretary's Office.....	\$13,604 19	\$11,585 73	\$2,018 46
2. School elections and school census.....			
3. Finance offices and accounts †.....	45,033 63	36,257 48	8,776 15
4. Legal services ‡.....			
5. Operation and maintenance of office buildings.....	14,390 10	3,188 97	11,201 13
6. Officers in charge of buildings.....	85,305 89	70,924 61	14,381 28
6a. Schoolhouse Custodian.....	6,143 80	4,049 80	2,094 00
7. Office of Superintendent of Schools.....	72,347 10	67,408 79	4,938 31
8. Enforcement of compulsory education and truancy laws..	41,857 89	40,403 55	1,454 34
9. Other expenses of general control.....	32,655 47	3,219 89	29,435 58
10. Totals.....	\$311,338 07	\$237,038 82	\$74,299 25

* This standard form corresponds to Schedule G 34 of the Bureau of the Census and has been worked out by that bureau after conference and correspondence with representatives of the United States Bureau of Education, the National Education Association, the National Association of School Accounting and Business Officials of Public Schools and with many school superintendents.

† Also in charge of supplies.

‡ Undertaken by Law Department of the city without expense to the School Committee.

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.*

A. PAYMENTS.

1.— EXPENSES (Cost of Conducting School System).	Total.	Salaries.	Other Objects.
EXPENSES OF GENERAL CONTROL (OVERHEAD CHARGES).			
1. Board of Education and Secretary's Office.....	\$13,604 19	\$11,585 73	\$2,018 46
2. School elections and school census.....			
3. Finance offices and accounts †.....	45,033 63	36,257 48	8,776 15
4. Legal services ‡.....			
5. Operation and maintenance of office buildings.....	14,390 10	3,188 97	11,201 13
6. Officers in charge of buildings.....	85,305 89	70,924 61	14,381 28
6a. Schoolhouse Custodian.....	6,143 80	4,049 80	2,094 00
7. Office of Superintendent of Schools.....	72,347 10	67,408 79	4,938 31
8. Enforcement of compulsory education and truancy laws..	41,857 89	40,403 55	1,454 34
9. Other expenses of general control.....	32,655 47	3,219 89	29,435 58
10. Totals.....	\$311,338 07	\$237,038 82	\$74,299 25

* This standard form corresponds to Schedule G 34 of the Bureau of the Census and has been worked out by that bureau after conference and correspondence with representatives of the United States Bureau of Education, the National Education Association, the National Association of School Accounting and Business Officials of Public Schools and with many school superintendents.

† Also in charge of supplies.

‡ Undertaken by Law Department of the city without expense to the School Committee.

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.—Continued.

A. PAYMENTS.—Continued.

EXPENSES OF INSTRUCTION.	Total.	DAY SCHOOLS.		EVENING SCHOOLS.					SPECIAL SCHOOLS AND ACTIVITIES.												EXTENDED USE OF THE PUBLIC SCHOOLS.		
		Elementary, Including Kindergarten.	Latin and High.	Evening Elementary.	Evening High.	Central Evening Elementary.	Evening Citizenship Classes, Summer Term.	Boston Trade School, Evening Classes.	Normal School.	Horace Mann School for the Deaf.	Schools for the Industries.	Continuation School.	Day School for Immigrants.	Boston Clerical School.	Boston Disciplinary Day School.	Speech Improvement Classes.	Summer Review High School.	Summer Review Elementary Schools.	Playgrounds.	Farm Service.	School Centers.	Lectures.	Use of School Accommodations for Various Purposes.
11. Salaries of supervisors of grades and subjects.....	\$88,102 17	\$62,208 47	\$14,049 69	\$2,070 81	\$2,185 76	—	—	\$273 08	\$634 84	\$35 95	\$18 45	\$650 71	\$1,091 96	\$35 03	\$0 91	\$2 74	\$0 91	\$5 48	\$1,241 12	—	\$3,309 85	—	\$287 81
12. Other expenses of supervisors.....	12,286 99	7,012 20	2,941 78	503 86	582 22	—	—	55 93	68 53	3 96	17 83	56 13	220 77	2 97	99	2 97	99	5 95	498 27	\$49 70	240 98	—	20 96
13. Salaries of principals and their clerks.....	328,860 82	217,999 94	74,300 22	3,780 50	2,926 00	—	—	349 74	4,930 05	3,336 55	10,867 07	7,104 89	—	1,135 86	—	—	280 00	1,800 00	—	—	—	—	—
14. Other expenses of principals.....	5,820 02	1,996 30	1,685 44	98 91	194 39	—	—	\$1 01	119 71	42 71	414 45	1,074 52	10 00	42 04	27 75	45 25	—	—	—	—	\$36 94	—	—
15. Salaries of teachers.....	4,220,176 66	2,862,807 47	1,059,509 55	12,075 00	19,765 50	—	—	2,756 25	33,125 51	20,121 86	72,952 10	60,886 60	3,882 42	12,266 11	1,301 21	9,187 11	2,712 00	11,110 00	24,095 05	—	11,206 42	—	805 50
16. Text-books, supplementary and reference books.....	64,547 42	42,071 10	20,348 78	—	88 74	—	—	—	987 81	54 39	384 84	53 75	27 75	333 35	—	179 58	14 76	2 57	—	—	—	—	—
17. Stationery and supplies used in instruction.....	183,084 03	106,746 01	45,634 46	578 61	1,396 08	—	—	1,595 13	1,362 66	507 64	10,069 21	5,131 80	69 73	1,073 70	14 64	825 05	71 19	454 76	6,465 93	—	165 92	—	21 51
18. Other expenses of instruction.....	3,102 31	498 61	168 03	32 30	68 24	—	—	55	7 11	1 42	661 12	53 21	—	2 52	6 80	35	—	—	228 68	—	1,373 37	—	—
19. TOTAL FOR INSTRUCTION.....	\$4,905,979 42	\$3,301,340 10	\$1,217,637 95	\$19,739 99	\$27,206 03	—	—	\$5,062 29	\$41,236 22	\$24,104 48	\$95,373 07	\$75,071 61	\$5,302 63	\$15,792 18	\$1,352 30	\$10,253 05	\$3,079 85	\$13,378 76	\$32,529 05	\$49 70	\$16,333 48	—	\$1,135 78
EXPENSES OF OPERATION OF SCHOOL PLANT.																							
20. Wages of janitors and other employees.....	\$377,011 79	\$281,610 58	\$62,852 43	\$3,351 67	\$2,214 72	—	—	\$666 86	\$2,993 15	\$1,585 52	\$7,336 38	\$3,039 28	—	\$719 95	\$482 45	\$840 87	\$119 62	\$1,162 57	\$5,045 04	—	\$2,119 72	—	\$920 98
21. Fuel.....	373,208 31	291,353 96	59,675 22	3,717 91	2,360 86	—	—	890 40	3,962 07	958 50	4,154 72	1,992 92	\$3 90	452 94	211 87	769 33	3 90	23 41	—	—	2,324 72	—	351 99
22. Water.....	51 80	—	—	—	—	—	—	—	—	—	—	51 80	—	—	—	—	—	—	—	—	—	—	—
23. Light and power.....	43,224 01	25,161 25	11,239 36	997 47	720 75	—	—	67 62	343 77	532 09	1,287 35	992 73	—	80 10	25 54	48 02	—	—	—	—	1,555 26	—	172 70
24. Janitors' supplies.....	14,847 55	11,758 29	2,531 84	—	—	—	—	—	87 11	44 15	269 99	96 10	—	14 37	5 09	40 61	—	—	—	—	—	—	—
25. Other expenses of operation of school plant.....	1,898 75	1,416 47	343 65	11 39	7 60	—	—	1 90	11 39	7 60	34 18	36 08	1 90	5 70	1 90	5 70	1 90	11 39	—	—	—	—	—
26. TOTAL FOR OPERATION.....	\$810,242 21	\$611,300 55	\$136,642 50	\$8,078 44	\$5,303 93	—	—	\$1,626 78	\$7,397 49	\$3,127 86	\$13,082 62	\$6,208 91	\$5 80	\$1,273 06	\$676 85	\$1,704 53	\$125 42	\$1,197 37	\$5,045 04	—	\$5,999 70	—	\$1,445 36
EXPENSES OF MAINTENANCE OF SCHOOL PLANT.																							
27. Repair of buildings and upkeep of grounds.....	\$390,957 15	\$303,100 63	\$81,089 65	\$10 80	\$14 10	—	—	—	\$676 90	\$351 00	\$1,869 96	\$2,443 21	—	—	—	—	—	—	—	—	—	—	—
28. Repair and replacement of equipment.....	48,915 40	40,575 30	7,299 89	2 50	—	—	—	—	324 72	128 91	231 19	352 89	—	—	—	—	—	—	—	—	—	—	—
29. Insurance.....	150 49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30. Other expenses of maintenance of school plant.....	6,457 82	5,636 30	461 82	—	—	—	—	—	169 78	—	87 42	83 50	—	—	—	—	—	—	—	—	—	—	—
31. TOTAL FOR MAINTENANCE.....	\$446,480 86	\$349,462 72	\$89,771 36	\$13 30	\$14 10	—	—	—	\$1,170 40	\$980 81	\$2,188 57	\$2,879 60	—	—	—	—	—	—	—	—	—	—	—
EXPENSES OF AUXILIARY AGENCIES.																							
LIBRARIES.																							
32. Salaries.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
33. Books.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34. Other expenses.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VOCATIONAL GUIDANCE.																							
32a. Salaries.....	\$8,067 84	\$6,454 27	\$1,613 57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
33b. Books.....	20 13	16 10	4 03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34c. Other expenses.....	611 36	489 09	122 27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PROMOTION OF HEALTH.																							
35. Salaries.....	66,752 03	60,557 94	4,473 60	\$27 26	\$18 18	—	—	\$4 54	\$203 10	\$208 50	\$916 73	\$86 35	\$4 54	\$78 94	\$4 54	\$13 62	\$19 17	\$235 02	—	—	—	—	—
36. Other expenses.....	3,257 20	3,059 79	145 06	2 99	1 99	—	—	50	4 61	2 87	13 69	10 68	50	1 50	50	2 74	1 75	8 03	—	—	—	—	—
TRANSPORTATION OF PUPILS.																							
37. Salaries.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
38. Other expenses.....	5,964 60	3,178 75	—	—	—	—	—	—	—	2,616 90	—	—	—	—	168 95	—	—	—	—	—	—	—	—
39. TOTAL FOR AUXILIARY AGENCIES.....	\$84,673 16	\$73,755 94	\$6,358 53	\$30 25	\$20 17	—	—	\$5 04	\$20 71	\$2,828 27	\$830 42	\$97 03	\$5 04	\$80 44	\$173 99	\$16 36	\$20 92	\$243 05	—	—	—	—	—
MISCELLANEOUS EXPENSES.																							
40. Payments to private schools.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
41. Payments to schools of other civil divisions.....	\$19,555 45	\$18,991 35	\$494 85	—	—	—	—	—	—	—	\$69 25	—	—	—	—	—	—	—	—	—	—	—	—
42. Care of children in institutions.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
43. Pensions *.....	118,221 48	96,509 98	18,888 15	—	—	—	—	—	\$1,246 40	\$1,576 95	—	—	—	—	—	—	—	—	—	—	—	—	—
44. Rent.....	35,902 20	20,934 00	7,661 00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45. Other miscellaneous expenses.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
46. TOTAL MISCELLANEOUS.....	\$173,679 13	\$136,435 33	\$27,044 00	—	—	—	—	—	\$1,246 40	\$1,576 95	\$69 25	\$7,307 20	—	—	—	—	—	—	—	—	—	—	—
TOTAL EXPENSE (11-46, INCLUSIVE).....	\$6,421,054 78	\$4,472,294 64	\$1,474,454 34	\$27,861 98	\$32,545 13	—	—	\$6,694 11	\$51,258 22	\$32,618 37	\$111,543 93	\$91,564 35	\$5,313 47	\$17,145 68	\$2,203 14	\$11,973 94	\$3,226 19	\$14,819 18	\$37,574 09	\$49 70	\$22,333 18	—	\$2,581 14
II.—OUTLAYS (Capital Acquisition and Construction).																							
47. Land.....	\$47,685 22	\$21,304 38	\$26,380 84	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
48. New buildings.....	465,576 57	416,935 15	43,383 09	—	—	—	—	—	—	—	\$5,258 33	—	—	—	—	—	—	—	—	—	—	—	—
49. Alteration of old buildings.....	7,343 14	7,343 14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50. Equipment of new buildings and grounds.....	69,020 59	33,329 90	21,030 53	—	—	—	—	—	—	—	14,660 16	—	—	—	—	—	—	—	—	—	—	—	—
51. Equipment of old buildings, exclusive of replacements.....	23,769 52	15,169 23	6,567 61	—	—	—	—	—	\$293 00	\$122 55	299 25	\$1,317 88	—	—	—	—	—	—	—	—	—	—	—
52. TOTAL OUTLAYS.....	\$613,395 04	\$494,081 80	\$97,362 07	—	—	—	—	—	\$293 00	\$122 55	\$20,217 74	\$1,317 88	—	—	—	—	—	—	—	—	—	—	—

* Includes pensions to teachers and to attendance officers and janitors, etc.

† Agricultural schools.

‡ Salaries of managers, leaders, conductors, etc.

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.— *Continued.*

III.— OTHER PAYMENTS.		Total.
53. Redemption of bonds		\$210,500 00
54. Redemption of short-term loans		—
55. Payment of warrants and orders of preceding year		—
56. Payments to sinking funds and for serial debt requirements		468,568 00
56a. Payments to sinking funds, receipts from sales of real property		37 13
57. Payments of interest		594,565 00
58. Miscellaneous payments, including payments to trust funds, text-books to be sold to pupils, etc.		22,490 03
59. Total		\$1,296,160 16
60. Balances at close of year, cash in treasury		\$1,674,271 00
60a. Stock on hand, close of year		119,663 16
61. Total payments (sum of totals 10-59, inclusive)		8,641,948 05
61a. Total payments and balances (60-61, inclusive)		\$10,435,882 21

B. RECEIPTS.

REVENUE RECEIPTS.		Total.
62. Subventions and grants from state		\$139,322 53
62a. Subventions and grants from Federal Government (Smith Hughes Act)		17,879 76
63. Subventions and grants from county		—
64. Subventions and grants from other civil divisions		—
65. Appropriations from city treasury		8,627,053 59
65a. Transferred from accrued interest, Permanent Pension Fund		2,870 55
66. General property taxes		—
67. Business taxes (licenses, excise taxes, taxes on corporations, taxes on occupations, etc.)		—
67a. Dog tax (less damages by dogs)		19,085 55
68. Poll taxes		—
69. Fines and penalties (forfeited advance payments, evening schools)		5,985 51
70. Rents and interest		434 88
71. Tuition and other fees from patrons		4,631 64
72. Transfers from other districts in payment of tuition		6,611 71
73. All other revenue		4,469 45
74. Total revenue receipts		\$8,828,345 17

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.— *Concluded.*

B. RECEIPTS.— *Concluded.*

NON-REVENUE RECEIPTS.		Total.
75. Loans and bond sales		—
75a. Sinking Funds		—
76. Warrants issued and unpaid		—
77. Sales of real property and proceeds of insurance adjustments		\$37 13
78. Sales of equipment and supplies		5,905 41
79. Refund of payments		—
80. Other non-revenue receipts		—
81. Total non-revenue receipts		\$5,942 54
82. Total receipts (sum of 74 and 81)		\$8,834,287 71
83. Balance at beginning of year, cash in treasury		1,531,749 18
83a. Credit money refunded		—
83b. Stock on hand, beginning of year		69,845 32
84. Total receipts and balances (82–83b, inclusive)		\$10,435,882 21

C. VALUE OF SCHOOL PROPERTY.

CLASS OF BUILDINGS.	Total Value of Sites, Buildings and Equip- ment.	Value of Sites and Buildings.	Value of Equipment.	Interest on Value of School Plant.
General control	\$264,000 00	\$256,000 00	\$8,000 00	—
Elementary schools	20,510,586 26	19,833,826 47	676,759 79	—
Secondary schools	6,132,099 32	5,805,125 00	326,974 32	—
Normal schools	403,275 00	387,075 00	16,200 00	—
Schools for the industries	610,288 26	476,631 64	133,656 62	—
Special schools	101,300 00	98,000 00	3,300 00	—

D. EXPENDITURES, INCOME FROM TRUST FUNDS.

	Total.
Bowdoin (Dorchester) School Fund	\$180 00
Eastburn School Fund	435 00
Franklin Medal Fund	35 00
Gibson School Fund	3,076 10
Horace Mann School Fund	307 00
Peter P. F. Degrand School Fund	1,507 59
Teachers' Waterston Fund	144 00
Charlestown Free School Fund	107 89
Total	\$5,792 58

TEXT-BOOKS.

TEXT-BOOKS LOST.

The number of text-books reported lost during the year was as follows:

High schools	1,489
Elementary schools	5,427
Evening schools	1,427
Special schools	20
Total number reported lost	<u>8,363</u>
The average number reported lost each year since 1885-86 (a period of thirty-three years) was 3,443, a total for the thirty-three years of	<u>113,613</u>
Total number of books lost in thirty-four years	<u><u>121,976</u></u>

The number of books in addition to the above lost and paid for, but which were not reordered by schools, was 1,006.

TEXT-BOOKS RETURNED.

The number of text-books returned from the schools as worn out during the year was as follows:

High schools	16,159
Elementary schools	45,971
Evening schools	136
Special schools	42
Total number reported worn out	<u>62,308</u>
The average number reported worn out each year since 1885-86 (a period of thirty-three years) was 54,509, a total for the thirty-three years of	<u>1,798,791</u>
Total number of books worn out in thirty-four years	<u><u>1,861,099</u></u>

In addition, 8,946 books were returned by principals as not being wanted.

BOOKS DESTROYED.

During the year 5,427 books were destroyed for fear of contagion.

TEXT-BOOKS GIVEN TO PUPILS.

During the year 3,700 copies of Morris's Household Science and Arts were retained by pupils completing the course in elementary schools.

TOTALS.

Since the free text-book law went into effect the schools have been supplied with 3,678,974 text-books. Of this number 1,329,976 are still in use in the schools, and the balance, 2,348,998, either have been lost or returned to the supply room as worn out or displaced.

BOOKS IN THE NORMAL, LATIN AND HIGH SCHOOLS.

The number of books charged January 1, 1919, used as text-books by the pupils of the Normal, Latin and high schools, was as follows:

	Number of Books January 1, 1919.	Number of Books January 1, 1918.	Increase for the Year.
Normal School.....	11,020	8,891	2,129
Public Latin School.....	33,205	31,518	1,687
Girls' Latin School.....	23,956	23,114	842
Brighton High School.....	14,235	12,671	1,564
Charlestown High School.....	9,878	11,390	* 1,512
Dorchester High School.....	40,908	39,641	1,267
East Boston High School.....	18,095	19,031	* 936
English High School.....	32,877	35,057	* 2,180
Girls' High School.....	38,580	39,077	* 497
High School of Commerce.....	24,352	24,213	139
High School of Practical Arts.....	11,027	9,719	1,308
Hyde Park High School.....	13,352	11,889	1,463
Mechanic Arts High School.....	18,137	18,546	* 409
Roxbury High School.....	24,311	24,341	* 30
South Boston High School.....	18,313	19,062	* 749
West Roxbury High School.....	19,076	17,271	1,805
Total number in Normal, Latin and high schools.....	351,322	345,431	5,891

* Decrease.

NUMBER OF TEXT-BOOKS CHARGED TO ELEMENTARY SCHOOLS
JANUARY 1, 1919.

DISTRICT.	Number of Books January 1, 1919.	Number of Books January 1, 1918.	Increase for the Year.	Decrease for the Year.
Abraham Lincoln.....	20,725	20,114	611	—
Agassiz.....	7,240	6,478	762	—
Bennett.....	14,411	14,184	227	—
Bigelow.....	10,395	11,262	—	867
Bowditch.....	10,488	10,526	—	38
Bowdoin.....	10,536	10,003	533	—
Bunker Hill.....	7,679	8,283	—	604
Chapman.....	15,390	14,958	432	—
Charles Sumner.....	11,159	11,340	—	181
Christopher Gibson.....	10,933	10,143	790	—
Dearborn.....	20,404	18,943	1,461	—
Dillaway.....	12,985	13,070	—	85
Dudley.....	13,523	13,493	30	—
Dwight.....	7,829	7,939	—	110
Edmund P. Tileston.....	7,913	6,939	974	—
Edward Everett.....	14,308	13,240	1,068	—
Elihu Greenwood.....	13,257	13,446	—	189
Eliot.....	20,732	20,416	316	—
Emerson.....	15,225	14,404	821	—
Everett.....	6,510	6,941	—	431
Francis Parkman.....	6,924	6,435	489	—
Franklin.....	11,859	11,539	320	—
Frederic W. Lincoln.....	10,216	10,114	102	—
Gaston.....	11,286	10,792	494	—
George Putnam.....	21,485	18,513	2,972	—
Gilbert Stuart.....	12,356	10,621	1,735	—
Hancock.....	22,386	19,605	2,781	—
Harvard-Frothingham.....	20,437	20,056	381	—
Henry Grew.....	7,944	7,843	101	—
Henry L. Pierce.....	18,426	17,071	1,355	—
Hugh O'Brien.....	16,239	15,318	921	—
Hyde.....	8,952	8,819	133	—
Jefferson.....	16,035	9,088	6,947	—
John A. Andrew.....	14,564	14,498	66	—
John Cheverus.....	14,808	13,190	1,618	—
John Winthrop.....	21,682	18,715	2,967	—
Lawrence.....	9,562	9,631	—	69
Lewis.....	26,060	23,778	2,282	—
Longfellow.....	15,427	14,370	1,057	—
Lowell.....	11,958	10,971	987	—
Martin.....	8,254	15,201	—	6,947
Mary Hemenway.....	17,399	15,984	1,415	—
Mather.....	21,613	20,419	1,194	—
Minot.....	6,416	6,292	124	—
Norcross.....	12,342	11,419	923	—
Oliver Hazard Perry.....	9,083	9,234	—	151
Oliver Wendell Holmes.....	34,525	32,189	2,336	—
Phillips Brooks.....	17,741	16,064	1,677	—
Prescott.....	9,343	9,289	54	—
Prince.....	11,225	11,110	115	—
Quincy.....	13,327	12,675	652	—
Rice.....	7,679	7,714	—	35
Robert G. Shaw.....	10,987	10,466	521	—
Roger Wolcott.....	25,472	20,888	4,584	—
Samuel Adams.....	18,751	17,576	1,175	—
Sherwin.....	9,094	8,281	813	—
Shurtleff.....	8,387	8,910	—	523
Theodore Lyman.....	14,531	13,867	664	—
Thomas Gardner.....	15,534	14,421	1,113	—
Thomas N. Hart.....	10,411	9,865	546	—
Ulysses S. Grant.....	13,834	12,932	902	—
Warren.....	11,722	11,219	503	—
Washington.....	12,491	12,175	316	—
Washington Allston.....	11,396	10,302	1,094	—
Wells.....	20,945	20,994	—	49
Wendell Phillips.....	15,641	14,369	1,272	—
William E. Russell.....	10,022	10,102	—	80
Totals for elementary schools.....	928,413	881,046	57,226	10,359

Net increase for the year, 47,367.

TEXT-BOOKS CHARGED TO ELEMENTARY SCHOOLS

JANUARY 1, 1919.

Adams: Elementary Commercial Geography	5,780
Aldrich & Forbes: Progressive Course in Reading, Book I	1,419
" " " " " Book II	3,194
" " " " " Book III	3,768
" " " " " Book IV	253
Aldrich & Forbes: Progressive Course in Reading, Book IV, Part 1	1,433
Aldrich & Forbes: Progressive Course in Reading, Book IV, Part 2	1,411
Aldrich & Forbes: Progressive Course in Reading, Book V	9
Aldrich & Forbes: Progressive Course in Reading, Book V, Part 1	1,087
Aldrich & Forbes: Progressive Course in Reading, Book V, Part 2	836
Aldrich & Foster: French Reader	213
Aldrich: Selections	52
Alexander: Spelling Book, Part I	5,560
" " " Part II	9,712
Armand: Grammaire Elementaire	385
Arnold Primer	2,826
Arnold & Gilbert: Stepping Stones to Literature, First Reader	3,690
" " " " " Second Reader	4,986
" " " " " Third Reader	4,991
" " " " " Fourth Reader	3,043
Arnold & Gilbert: Stepping Stones to Literature, Fifth Grade Reader	2,063
Arnold & Gilbert: Stepping Stones to Literature, Sixth Grade Reader	1,331
Arnold & Gilbert: Stepping Stones to Literature, Seventh Grade Reader	1,756
Arnold & Gilbert: Stepping Stones to Literature, Higher Grades	1,509
Bacci & Gotti: Le Gloria della Patre	150
Bacon: New German Grammar for Beginners	35
Bailey-Manly Spelling Book, Part I	5,885
" " " " Part II	12,005
Baldwin & Bender: First Reader	594
" " Second Reader	1,175
" " Third Reader	1,587
" " Fourth Reader	1,161
" " Fifth Reader	853
" " Sixth Reader	311
" " Seventh Reader	405
" " Eighth Reader	141
Ballard: Short Stories of Oral French	134
Carried forward	85,743

<i>Brought forward</i>	85,743
Ballard & Stewart: Short Stories for Oral Spanish	45
Bassett: Plain Story of American History	158
Bemis: Patriotic Reader	220
Bender: The Bender Primer	564
Bennett: Master Skylark	36
Bertenshaw: Longmans' Modern French Course, Part I	464
Bierman & Frank: Conversational French Reader for Beginners	92
Blasidell: Child's Book of Health	651
" Our Bodies and How We Live	538
" Child Life Primer	4,424
" Second Reader	4,992
" Third Reader	2,946
" Fourth Reader	2,518
Blodgett: Primer	3,109
" First Reader	1,626
Boyden: First Book in Algebra	655
Brigham & McFarlane: Essentials of Geography, First Book	2,829
" " " " Second Book	4,067
Brooks: English Composition, Book I	385
Brown: The Plant Baby and its Friends	75
Browne & Haldeman: Clarendon Dictionary	9,987
Bruce: Lectures Faciles	759
Brumbaugh: Standard Fourth Reader	1,872
" Standard Fifth Reader	1,289
Bryce & Spaulding: Aldine First Language Book, Part I	1,878
" " " " " " Complete	1,858
" " Aldine Second Language Book	486
Buckwalter: Easy Primer	250
" Easy First Reader	781
" Second Reader	2,036
" Third Reader	2,061
" Fourth Reader	3,712
" Fifth Reader	1,296
Buehler & Hotchkiss: Modern English Lessons, Book I	1,487
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book I	3,512
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book II	3,147
Burchill, Ettinger & Shimer: Progressive Road to Reading, Introductory Book III	1,644
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book III	1,984
Burchill, Ettinger & Shimer: Progressive Road to Reading, Introductory Book IV	240
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book IV	1,095
Burns' Poems	90
Capus: Pour Charmer Nos Petits	270
<i>Carried forward</i>	157,871

<i>Brought forward</i>	157,871
Carroll & Brooks: Brooks Primer	614
“ “ First Reader	1,281
Chancellor: Reading and Language Lessons	18
Channing: Elements of United States History	329
“ Short History of the United States	1,723
Chapuzet & Daniels: Mes Premiers Pas en Français	1,986
Chardenal: The New Chardenal	138
Claude: Twilight Thoughts	702
Coe: School Reader, Third Grade	1,521
“ “ “ Fourth Grade	2,010
Coe & Christie: Story Hour Reader III	221
Cole: Graded Arithmetic, Book III	1,313
“ “ “ Book IV	1,176
“ “ “ Book V	658
“ “ “ Book VI	569
“ “ “ Book VII	419
Congdon: Music Primer, No. 1	1,608
“ “ “ No. 2	422
Conn: Introductory Physiology and Hygiene	7,988
“ Elementary Physiology and Hygiene	8,109
Cooley: Elements of Natural Philosophy	104
Cooper: The Spy	60
Culler: First Book in Physics	2,805
Cunningham: First Book for Non-English Speaking People	592
Cyr: Primer	8,106
“ First Reader	4,224
“ Second Reader	4,845
“ Third Reader	5,085
“ Fourth Reader	5,292
“ Fifth Reader	2,784
Daly: Advanced Rational Speller	1,752
Davis: Seulette	173
Davison & Surette: Book of Words	14,698
DeMonvert: La Belle France	195
DeSegur: Les Malheurs de Sophie	138
D'Ooge: Latin for Beginners	30
Dowling: Reading, Writing and Speaking Spanish for Beginners	700
Driggs: Live Language Lessons, Third Book	272
Dryer: Elementary Economic Geography	456
Dunn: The Community and the Citizen	220
Dunton & Kelley: Graded Course in English, First Book	1,282
“ “ Graded Course in English, Language Lessons	1,049
Dunton & Kelley: Inductive Course in English, Language Lessons	1,221
Durrell & Hall: Arithmetic, Book I	551
“ “ “ Book II	803
“ “ “ Book III	546

Carried forward 248,659

<i>Brought forward</i>	248,659
Edson-Laing: Reader I	110
" Reader II	324
" Reader III	643
" Reader IV	270
" Reader V	280
Elson: Elson Primary School Reader, Book I	835
" " " " " Book II	1,083
" " " " " Book III	1,529
" " " " " Book IV	872
Elson & Keek: Elson Grammar School Reader, Book I	862
" " " " " Book II	853
" " " " " Book III	1,400
" " " " " Book IV	1,447
Elson & Runkel: Primer	551
Enekel: New Dictionary of the English and Italian Languages	150
Espinosa: Elementary Spanish Reader	84
Evans & Marsh: First Year Mathematics	930
Fall: Science for Beginners	11
Fassett: The Beacon Primer	1,895
" " " First Reader	881
" " " Second Reader	580
" " " Third Reader	378
Finch Primer	1,638
Fiske: History of United States for Schools	850
Foster: Geschichten und Marchen	254
Franklin Arithmetics	569
Franklin Readers	930
Frye: Leading Facts in Geography, Book I	1,268
" " " " Book II	1,152
Funk & Wagnalls: Comprehensive Standard Dictionary	2,097
" " Concise Standard Dictionary	4,094
Gifford: Elementary Lessons in Physics	1,216
" Progressive Mental Arithmetic, Book I	4,876
" " " Book II	3,322
Gilbert & Harris: Guide Book to English, Book I	2,242
Gordy: Elementary History of the United States	2,732
" History of the United States for Schools	2,561
Griffith: Essentials of Woodworking	59
Gronow: Jung Deutschland	143
Guerber: Contes et Légendes, Part I	926
" Märchen und Erzählungen, Part I	447
Hale: Man without a Country and Other Stories	110
Hall: All Spanish Method, First Book	168
Hall & Brumbaugh: Standard Primer	19
Hamilton: Standard Arithmetic, Book II	106
Hanson: English Composition	2
Hapgood: School Needlework	60
<i>Carried forward</i>	296,468

<i>Brought forward</i>	296,468
Harris & Waldo: First Journeys in Numberland	570
Harry: French Anecdotes	5
Hartwell, McGlenen & Skelton: Boston and Its Story	270
Hazen: Fourth Reader	1,800
Heath: Primer	1,031
" First Reader	1,349
" Second Reader	2,258
" Third Reader	2,362
" Fourth Reader	2,086
" Fifth Reader	1,372
Hervey & Hix: Horace Mann Primer	69
" " " " Reader I	160
" " " " " II	165
" " " " " III	274
" " " " " IV	514
Hicks: Champion Spelling Book, Part I	859
" " " " Part II	798
" " " " Complete	85
Higgins: Lessons in Physics	2,316
Higginson: Young Folks' History of the United States	106
Hills & Ford: First Spanish Course	129
Hitchcock: New Practice Book in English Composition	1,579
Holmes & Gallagher: Composition and Rhetoric	45
How to Run a Lathe	90
Howe: Primer	1,387
" First Reader	1,072
" Second Reader	1,703
" Third Reader	1,852
" Fourth Reader	3,263
" Fifth Reader	3,230
" Reader, Book VI	771
" " Book VII	1,399
" " Book VIII	1,109
Hoyt & Peet: Everyday Arithmetics, Book I	271
" " " " Book II	808
" " " " Book III	452
" " First Year in Number	365
Hübsch & Smith: Progressive Lessons in German	92
Hunt: Geometry	153
" Simple Problems in Industrial Arithmetic	76
James & Sanford: Our Government, Local, State and National	4,828
Jones: First Reader	2,430
" Second Reader	4,447
" Third Reader	5,177
" Fourth Reader	3,945
" Fifth Reader	2,612
" The Child's Own Spelling Book	99
<i>Carried forward</i>	358,301

<i>Brought forward</i>	358,301
Judson & Bender: Graded Literature Readers, First Book	229
“ “ “ “ “ Second Book	405
“ “ “ “ “ Third Book	512
“ “ “ “ “ Fourth Book	466
“ “ “ “ “ Fifth Book	40
Kelley & Morse: Natural Speller, Book I	2,219
“ “ “ “ “ Book II	1,128
King: Elementary Geography	9,101
“ Advanced Geography	8,804
Kittredge: Practical Homemaking	30
Krohn: First Book in Physiology and Hygiene	4,468
“ Graded Lessons in Physiology and Hygiene	5,094
Lewis: Lippincott Primer	524
“ “ First Reader	264
“ “ Second Reader	815
Lincoln: Boston School Kitchen Text-book	25
Lister: Writing Lessons for Primary Grades	36,671
Lohmeyer: Der Geissbub von Engelberg	30
Macaulay: Lays and Ballads	50
“ Lays of Ancient Rome	140
MacDemott: Lectura Natural de Heath, Libro Primero	333
“ “ “ “ “ Segundo	36
McLaughlin & Gilchrist: New Educational First Music Reader	11,029
McLaughlin & Gilchrist: New Educational Second Music Reader	5,894
McLaughlin & Gilchrist: New Educational Third Music Reader	5,598
McLaughlin & Gilchrist: New Educational Fourth Music Reader	5,137
McLaughlin & Gilchrist: New Educational Fifth Music Reader	4,226
McLaughlin & Gilchrist: Educational First Music Reader (Old Edition)	96
McLaughlin & Van Tyne: History of the United States	744
“ “ History of United States for Schools, Vol. I	197
“ “ History of United States for Schools, Vol. II	40
McMaster: Brief History of the United States	966
Mace: School History of the United States	135
Mairet: La Tache du Petit Pierre	45
Marshall: Business Speller and Technical Word Book	50
Mason & Veazie: National Fourth Music Reader	225
Masterpieces of American Literature	5,988
Meras: Le Petit Vocabulaire	4
“ Le Premier Livre	730
Meras & Roth: Petits Contes de France	90
<i>Carried forward</i>	470,879

<i>Brought forward</i>	685,879
Patton: <i>Causeries en France</i>	346
Pearson: <i>Essentials of Latin for Beginners</i>	244
Pelo & Gardner: <i>Sanborn Speller, Part I</i>	46
“ “ “ “ <i>Part II</i>	466
“ “ “ “ <i>Part III</i>	93
Perkins: <i>Beginning Latin Book</i>	30
Pichon: <i>Première Leçons de Vocabulaire et d'Elocution</i>	161
Pichon-Sattler: <i>Deutsches Lese und Redebuch</i>	440
Powell: <i>The Narrative Poems of Longfellow</i>	100
Redway & Hinman: <i>Natural Introductory Geography</i>	3,058
“ “ “ <i>School Geography</i>	3,845
Reinsch: <i>Civil Government</i>	250
Rhodes: <i>Old Testament Narratives</i>	45
Ripley & Tapper: <i>Natural Music Readers, old edition</i>	798
“ “ “ <i>Harmonic Primer</i>	6,483
“ “ “ <i>First Music Reader</i>	3,642
“ “ “ <i>Second Music Reader</i>	3,463
“ “ “ <i>Third Music Reader</i>	3,578
“ “ “ <i>Fourth Music Reader</i>	2,892
“ “ “ <i>Fifth Music Reader</i>	1,684
Ritchie: <i>Fabulae Faciles</i>	83
“ <i>Primer of Sanitation</i>	1,990
Ritchie & Caldwell: <i>Primer of Hygiene</i>	4,244
“ “ “ <i>Physiology</i>	365
Robbins: Dressel & Graff: <i>New Barnes Readers, Book I</i>	25
Scott: <i>Elementary Latin</i>	50
“ <i>Lady of the Lake</i>	40
Scott & Denny: <i>Elementary Composition</i>	563
Scott & Southworth: <i>Lessons in English, Book I</i>	5,479
Sensenig-Anderson: <i>Introductory Arithmetic</i>	801
“ “ <i>Essentials of Arithmetic</i>	1,355
Shakespeare: <i>As You Like It</i>	190
“ <i>Merchant of Venice</i>	40
“ <i>Midsummer Night's Dream</i>	443
“ <i>Tempest</i>	260
Sheldon-Barnes: <i>American History</i>	452
Solano: <i>Class-Room Spanish</i>	517
Southworth & Paine: <i>Bugle Calls of Liberty</i>	346
Southworth & Stone: <i>Exercise Book in Arithmetic</i>	1,421
Spaulding & Bryce: <i>Aldine Primer</i>	5,075
“ “ “ <i>First Reader</i>	4,579
“ “ “ <i>Second Reader</i>	3,958
“ “ “ <i>Third Reader</i>	3,215
“ “ “ <i>Fourth Grade Reader</i>	1,375
“ “ “ <i>Fifth Grade Reader</i>	744
“ “ “ <i>Sixth Grade Reader</i>	454
“ “ “ <i>Seventh Grade Reader</i>	326
Spink: <i>French Plays for Children</i>	140
<i>Carried forward</i>	756,073

<i>Brought forward</i>	756,073
Stone: History of England	186
Stone-Millis: Arithmetic, Primary Book	6,223
Stone-Millis: Arithmetic, Intermediate Book	7,267
“ “ “ Advanced Book	7,007
Stowell: Healthy Body	681
Summers: Primer	202
“ First Reader	186
“ Second Reader	378
Swinton: Language Lessons	48
Talbot: Le Français et sa Patrie	174
Tappan: Our Country's Story	3,072
Tarbell: Introductory Geography	3,078
“ Complete Geography	1,570
Tarr & McMurry: Geography, Book I, Part 1	1,289
“ “ “ Book I, Part 2	768
“ “ “ Book I, Complete	8,238
“ “ “ Book II, Part 1	2,935
“ “ “ Book II, Part 2	2,795
“ “ “ Book II, Complete	13,667
“ “ Geographies, old edition	220
Thwaites & Kendall: History of the United States for Grammar Schools	470
Tuell & Fowler: First Book in Latin	124
Tufts: Cecilian Series of Study and Song, Book III	2,339
“ “ “ “ “ Book IV	1,680
Tufts: Cecilian Series of Study and Song, Books III and IV, combined	1,423
Tufts & Holt: New Normal First Music Reader	7,398
“ “ “ “ Second Music Reader, Part 1	1,551
“ “ “ “ “ “ “ Part 2	836
“ “ “ “ “ “ “ Complete	4,518
“ “ “ “ Third Music Reader, Part 1	2,761
“ “ “ “ “ “ “ Part 2	791
“ “ “ “ “ “ “ Complete	628
Van Sickle, Seegmiller & Jenkins: Riverside Primer	325
“ “ “ Riverside First Reader	318
“ “ “ Riverside Second Reader	1,115
“ “ “ Riverside Third Reader	1,107
“ “ “ Riverside Fourth Reader	614
“ “ “ Riverside Fifth Reader	543
“ “ “ Riverside Sixth Reader	350
Van Tuyl: Essentials of Business Arithmetic	305
Varney: Robin Reader	2,381
Vosburgh & Gentleman: Junior High School Mathematics, First Course	4,083
Vosburgh & Gentleman: Junior High School Mathematics, Second Course	1,760
Wallach: First Book in English for Foreigners	103
“ Second Book in English for Foreigners	32
Walsh & Suzzallo: Arithmetic, Book II	135
<i>Carried forward</i>	853,747

<i>Brought forward</i>	853,747
Walsh & Suzzallo: Arithmetic, Book III	101
Walton & Holmes: Arithmetic, Book I	5,511
“ “ “ Book II	10,416
“ “ “ Book III	10,520
“ “ “ Book IV	4,620
Ward: Sentence and Theme	54
Webster: Academic Dictionary	3,145
“ Elementary School Dictionary	660
“ Shorter School Dictionary	904
Wentworth & Smith: Arithmetic, Book I	331
“ “ “ Book II	1,203
“ “ “ Book III	498
“ “ Essentials of Arithmetic, Primary Book	50
Wentworth & Smith: Essentials of Arithmetic, Intermediate Book	69
Wentworth & Smith: Essentials of Arithmetic, Advanced Book	4
Werner: Primer	342
Williams & Fisher: Elements of the Theory and Practice of Cookery	6
Woodburn & Moran: Elementary American History and Government	5,143
Woodburn & Moran: Introduction to American History	1,613
Worcester: New Primary Dictionary	3,393
“ Comprehensive Dictionary	19,263
“ New Pronouncing Speller	923
“ New School Dictionary of the English Language	4
Young & Jackson: Appleton Arithmetic, Primary Book	675
“ “ “ “ Second Book	1,126
“ “ “ “ Third Book	962
Miscellaneous books in Hyde Park schools	3,130
Total	<u>928,413</u>

SUMMARY TEXT-BOOKS CHARGED TO SCHOOLS

JANUARY 1, 1919.

Normal, Latin and high schools	351,322
Elementary schools	928,413
Boston Clerical School	1,539
Horace Mann School	1,448
Trade School for Girls	436
Boston Trade School	1,871
Continuation schools	449
Day School for Immigrants	635
Class for Conservation of Eyesight	70
Speech Improvement classes	860
Boston Disciplinary Day School	317
Evening schools	42,616
Total	<u>1,329,976</u>

This shows a net increase of 50,696 books during the year.

**ESTIMATES AND ITEMIZED APPROPRIATION
ORDER FOR THE FINANCIAL
YEAR 1919-20.**

BUDGET.

APPROPRIATIONS, 1919-20.

OFFICE OF THE BUSINESS AGENT OF THE SCHOOL COMMITTEE,
ROOM 801, CITY HALL ANNEX, July 14, 1919.

To the School Committee:

In compliance with paragraph 2 of section 99 of the Rules, I submit herewith the estimates and itemized appropriation order to cover the expenses of the public schools for the financial year February 1, 1919, to January 31, 1920, both included.

The average valuation of the city for the three years 1916, 1917 and 1918, with all abatements allowed up to December 31, 1918, as certified to his Honor the Mayor by the Board of Assessors, is \$1,518,938,942.75. This is the sum upon which all appropriations by the City Council and the School Committee for the financial year 1919-20 are based.

The School Committee is authorized by law to appropriate the following sums:

(a.) Four dollars and eleven cents upon each one thousand dollars of the valuation of the city for general school purposes. (Chapter 206 of the Special Acts of 1919.)

(b.) Sixty-five cents upon each one thousand dollars of the valuation of the city for the construction and furnishing of new school buildings, both temporary and permanent, including the taking of land therefor, and for school yards and the preparing of school yards for use, and for the rent of hired school accommodations. (Chapter 206 of the Special Acts of 1919.)

(c.) Thirty-five cents upon each one thousand dollars of the valuation of the city for the alteration and repair of school buildings and for furniture, fixtures, and means of escape in case of fire, and for fire protection for existing buildings, and for improving existing school yards. (Chapter 206 of the Special Acts of 1919.)

(d.) Eight cents upon each one thousand dollars of the valuation of the city for organizing and conducting physical training and exercises, athletics, sports, games and play, and for providing apparatus, equipment and facilities for the same in buildings, yards and playgrounds under the control of the School Committee, or upon any other land which the committee may have the right to use for this purpose, under the provisions of chapter 295 of the Acts of 1907. (Chapter 206 of the Special Acts of 1919.)

(e.) Six cents upon each one thousand dollars of the valuation of the city for the employment of one supervising female nurse and so many district female nurses, as, in the opinion of said committee, are necessary in accordance with the provisions of chapter 357 of the Acts of 1907, and for the employment of such number of school physicians as, in the opinion

of the School Committee, may be necessary, and for the care of teeth of school children. (Chapter 206 of the Special Acts of 1919.)

(f.) Two cents upon each one thousand dollars of the valuation of the city for the purpose of conducting educational and recreative activities in or upon school property under the control of the School Committee, and the use thereof by individuals and associations in accordance with the provisions of chapter 195 of the Acts of 1912 and chapter 86 of the Special Acts of 1916. (Chapter 206 of the Special Acts of 1919.)

(g.) Seven cents upon each one thousand dollars of the valuation of the city for the payment of pensions to members of the teaching or supervising staff of the public schools of the city, and to persons who were annuitants of the Boston Teachers' Retirement Fund at the time when chapter 589 of the Acts of 1908 took effect, and other teachers who had retired prior to said time, in accordance with the provisions of said chapter 589, chapter 537 of the Acts of 1909, chapter 617 of the Acts of 1910, chapter 569 of the Acts of 1912, and acts in amendment thereof, and of the provisions of chapter 206 of the Special Acts of 1919. (Chapter 206 of the Special Acts of 1919.)

(h.) Two cents upon each one thousand dollars of the valuation of the city for promoting the Americanization and better training for citizenship of foreign-born persons. (Chapter 206 of the Special Acts of 1919.)

(i.) Two cents upon each one thousand dollars of the valuation of the city for vocational guidance. (Chapter 206 of the Special Acts of 1919.)

(j.) The unexpended balance for the financial year 1918-19.

(k.) The excess of income, if any, for the financial year 1918-19 over that estimated.

(l.) The estimated income for the financial year 1919-20.

TOTAL MONEY AVAILABLE.

Exclusive of the money available for new school buildings, lands, yards and furnishings, viz., sixty-five cents on each one thousand dollars of the valuation and amounting to \$987,310.31, the sums available for the financial year 1919-20 will be as follows:

\$4.11 per \$1,000 for general purposes	\$6,242,839 05
.35 per \$1,000 for repairs and alterations to school buildings	531,628 63
.08 per \$1,000 for physical education	121,515 11
.06 per \$1,000 for school physicians and nurses	91,136 34
.02 per \$1,000 for extended use of the public schools	30,378 78
.07 per \$1,000 for pensions to teachers	106,325 73
.02 per \$1,000 for promoting Americanization	30,378 78
.02 per \$1,000 for vocational guidance	30,378 78
Unexpended balance general appropriation 1918-19	102,370 53
Unexpended balance appropriation Schoolhouse Department	2,258 16
Excess of income over amount estimated	11,132 94
Estimated income 1919-20	163,581 30
Total amount available	<u>\$7,463,924 13</u>

INCREASES IN SALARIES OF INSTRUCTORS.

The increases in salaries of instructors for the past ten years have been as follows:

1909-10 over 1908-09	. . . . .	\$130,829 52
1910-11 over 1909-10	. . . . .	136,039 34
1911-12 over 1910-11	. . . . .	99,206 87
1912-13 over 1911-12	. . . . .	321,488 72
1913-14 over 1912-13	. . . . .	278,135 70
1914-15 over 1913-14	. . . . .	182,608 65
1915-16 over 1914-15	. . . . .	201,297 13
1916-17 over 1915-16	. . . . .	78,656 15
1917-18 over 1916-17	. . . . .	84,146 20
1918-19 over 1917-18	. . . . .	149,121 62
Total increase in ten years	. . . . .	<u>\$1,661,529 90</u>

The estimated increase in the salaries of instructors for the current year over that of 1918-19 is \$645,818.56.

I recommend the passage of the accompanying orders.

WILLIAM T. KEOUGH,
Business Agent.

ESTIMATES FOR FINANCIAL YEAR, 1919-20.

SALARIES OF INSTRUCTORS.

Normal School.

Normal School	\$37,473 54
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Latin and High Schools.

Public Latin	\$79,389 47
Girls' Latin	52,090 08
Brighton High	38,713 86
Charlestown High	33,465 29
Dorchester High	126,702 43
East Boston High	50,940 93
English High	160,313 89
Girls' High	109,922 14
High School of Commerce	109,230 07
High School of Practical Arts	56,487 99
Hyde Park High	45,196 44
Mechanic Arts High	133,112 27
Roxbury High	62,115 16
South Boston High	57,027 45
West Roxbury High	59,200 55
Laboratory assistance, English High	600 00
Laboratory assistance, Girls' High	500 00
One additional Instructor of Salesmanship from September 1	389 00
Temporary teachers	16,000 00
	<hr/>
	\$1,191,397 02
Reduction in estimates	10,000 00
	<hr/>
	1,181,397 02

Elementary School Districts (Including Kindergarten Teachers).

Abraham Lincoln	\$66,959 60
Agassiz	28,029 46
Bennett	53,131 33
Bigelow	40,440 87
Bowditch	39,398 33
Bowdoin	39,086 91
Bunker Hill	29,257 99
Chapman	42,836 93
Charles Sumner	41,058 39
Christopher Gibson	37,105 66
Dearborn	62,186 81

Dillaway	\$47,508 32
Dudley	43,040 75
Dwight	33,507 79
Edmund P. Tileston	31,437 20
Edward Everett	54,408 93
Elihu Greenwood	43,125 30
Eliot	80,312 83
Emerson	48,305 33
Everett	27,024 81
Francis Parkman	26,828 74
Franklin	40,547 06
Frederic W. Lincoln	31,306 13
Gaston	35,670 19
George Putnam	70,063 39
Gilbert Stuart	34,014 93
Hancock	82,900 84
Harvard-Frothingham	52,998 26
Henry Grew	23,798 87
Henry L. Pierce	57,600 27
Hugh O'Brien	48,786 89
Hyde	34,891 05
Jefferson	49,901 99
John A. Andrew	37,992 05
John Cheverus	54,263 60
John Winthrop	56,359 07
Lawrence	31,278 79
Lewis	71,142 79
Longfellow	42,103 85
Lowell	42,701 74
Martin	35,471 01
Mary Hemenway	67,625 06
Mather	74,143 92
Minot	20,972 53
Norcross	40,076 41
Oliver Hazard Perry	27,166 92
Oliver Wendell Holmes	118,991 72
Phillips Brooks	48,574 97
Prescott	23,913 59
Prince	36,002 03
Quincy	44,910 78
Rice	31,364 99
Robert G. Shaw	40,210 99
Roger Wolcott	84,527 37
Samuel Adams	78,040 23
Sherwin	43,456 13
Shurtleff	29,718 93
Theodore Lyman	43,685 96
Thomas Gardner	50,790 66

Thomas N. Hart	\$43,436 00
Ulysses S. Grant	46,454 68
Warren	36,876 29
Washington	57,995 70
Washington Allston	38,434 08
Wells	67,417 85
Wendell Phillips	53,646 21
William E. Russell	35,865 99
Allowance for special and emergency assistants	126,976 10
Assignment of Marie A. Solano to supervision of language work in intermediate classes	600 00
2 clerical assistants, additional	832 00
5 additional assistants, kindergarten, from October 1	720 00
Promotion of 5 assistants, kindergarten, to first assistants, kindergarten, from October 1	90 00
6 additional instructors, special classes, from September 1	1,572 00
40 pupil clerical assistants	4,000 00
	<hr/>
	\$3,267,875 14
Reduction in estimates	20,000 00
	<hr/>
	\$3,247,875 14

Horace Mann School.

Principal and teachers	24,977 00
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Trade School for Girls (Day, Evening and Summer Classes).

Principal, teachers and clerks	54,519 49
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Boston Trade School.

Master, teachers and clerks, day school (existing force)	39,103 70
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Boston Clerical School.

Head-master and teachers	17,815 33
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Boston Disciplinary Day School.

Teachers' salaries	1,478 53
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Department of Manual Arts.

Director	\$3,540 00
First Assistant Director	2,732 33
1 Assistant Director assigned two-fifths time to April 1	1,108 80
2 Assistant Directors	4,480 00
1 Assistant Director, assigned from April 1	1,629 00
8 Assistants	14,167 32

1 Additional Assistant from February 1	\$1,199 00	
1 Additional Assistant from September 1	400 00	
5 Shop Foremen	8,313 35	
2 Shop Instructors promoted to Shop Foremen from September 1	58 68	
3 Foremen, Shop Work	4,988 01	
12 Instructors in Manual Training	18,108 80	
40 Assistant Instructors in Manual Training	54,772 66	
9 Shop Instructors	12,636 08	
5 Shop Instructors from September 1	1,764 00	
9 Instructors, Shop Work	11,847 00	
21 Prevocational Assistants	30,752 00	
1 Prevocational Assistant, assigned	524 00	
4 Emergency Shop Instructors	6,790 00	
2 Temporary Prevocational Instructors on part time (one, \$2.20 per 2-hour period; one, \$4.40 per 4-hour period)	1,280 40	
1 Temporary Shop Instructor on one-fifth time to July 1	139 68	
Instructors in Gardening, Supervisors of Gardening, and Assistant Supervisors of Gardening	5,100 00	
2 Temporary Teachers of Modeling, North Bennet Street Industrial School, one on one-fifth time and one on half time	543 20	
3 Vocational Art Instructors (Art Museum) on part time, and 1 Monitor on full time	1,200 00	
4 Assistants assigned to Normal School	725 00	
1 Assistant promoted to First Assistant, February 1	286 00	
1 Assistant promoted to First Assistant, September 1	36 67	
Salary adjustments	417 67	
		\$189,539 65

Department of Household Science and Arts.

Director	\$2,820 00
Assistant Director	1,692 00
42 Teachers of Cookery	50,281 52
1 additional Teacher of Cookery from September 1	232 00
63 Teachers of Sewing	73,678 38
1 additional Teacher of Sewing from September 1	232 00
Temporary Teachers, Cookery	546 00
Temporary Teachers, Sewing	—
1 Prevocational Instructor from February 1	726 00

3 Prevocational Instructors from September 1	\$744 00	\$130,951 90
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Department of Music.

Director	\$3,449 67	
4 Assistant Directors	10,728 00	
9 Assistants	13,567 80	
10 Elementary Assistants assigned	250 00	27,995 47

Speech Improvement Classes.

Teachers' salaries	11,282 13
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Continuation School.

Teachers' salaries	\$89,167 35	
Temporary teachers now in service	6,984 00	
3 Clerical Assistants from January 1	2,088 00	
2 additional Instructors, Boys' Classes, from September 1	1,016 00	
3 Assistants, Elementary Schools, promoted to Instructors	416 00	
1 Special Sewing Instructor promoted to Trade Assistant	16 00	
1 Special Assistant promoted to Helper	36 00	
Salary adjustments	400 00	100,123 35

Department of Evening Schools.

Director	\$3,577 00	
Supervisor of Division C Classes	291 00	
Salary adjustments	48 50	3,916 50

Evening High Schools.

Salaries of principals, teachers and clerical assistants, existing schools	\$36,867 19	
Salary adjustments	839 50	37,706 69

Evening Elementary Schools.

Salaries of principals, teachers and clerical assistants, existing schools	\$15,502 14	
Salary adjustments	582 00	16,084 14

Evening School Extension.

Salaries of principals, teachers and clerks	—
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Boston Trade School, Evening Classes.

Salaries of teachers and clerks	\$5,720 25	
Salary adjustment	—	5,720 25

SUMMER REVIEW SCHOOLS.

High Review School.

Salaries of principal and teachers	\$2,992 00
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Elementary Review Schools.

Principals and teachers	14,632 50
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Department of Practice and Training.

First Assistant Director	\$2,335 67	
4 Assistant Directors	8,155 67	
	<hr/>	10,491 34

Director of Kindergartens.

Director	\$2,620 00	
Assistant Director	1,692 00	
	<hr/>	4,312 00

Director of Special Classes.

Director	2,140 00
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Department of Salesmanship.

Director	2,100 00
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Director of Penmanship.

Director	2,004 00
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Department of Educational Investigation and Measurement.

Assistant Director of Promotion and Educational Measurement	\$2,580 00	
Salary of an elementary assistant assigned	1,086 93	
Study of Intermediate Program	200 00	
Supervision of testing, summer work	200 00	
Salary adjustments	40 00	
	<hr/>	4,106 93
Salary adjustments		10,127 36

Total, salaries of instructors	<u>\$5,180,865 96</u>
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SALARIES OF OFFICERS.

Officers, Clerks, Assistants and Stenographers.

Superintendent	\$10,000 00
Assistants (25) to the Superintendent	23,220 00
Assistant Superintendents (5)	27,480 00
Secretary	4,740 00
Assistant Secretary	2,700 00
Assistants (6) to the Secretary	6,180 00
Business Agent	4,740 00

Chief Accountant (1), assistants (22), and chauffeurs (2) to the Business Agent . . .	\$31,800 00	
Schoolhouse Custodian	3,000 00	
Clerk to Schoolhouse Custodian	1,020 00	
City Treasurer, Custodian of the Retirement Fund	1,500 00	
Telephone operator	792 00	
Substitute telephone operator	275 00	
Allowances for temporary assistance:		
Superintendent, temporary assistance	1,900 00	
Secretary, temporary assistance	350 00	
Business Agent, temporary assistance	1,550 00	
Schoolhouse Custodian, temporary assistance	84 00	
Proposed increase in number of assistants:		
Superintendent, two from January 1	1,572 34	
Increases in salaries:		
Superintendent's office	2,148 00	
Secretary's office	696 00	
Business Agent's office and supply room	2,232 00	
Schoolhouse Custodian's office	96 00	
Officers, clerks, assistants and stenographers		\$128,075 34

Attendance Officers.

1 Chief Attendance Officer	\$2,760 00	
23 Attendance Officers	35,709 80	
4 Temporary Attendance Officers, two on full time and two on part time	2,752 00	
Salary adjustments	1,000 00	
		42,221 80

Supervisor of Licensed Minors.

Supervisor	\$1,836 00	
Salary adjustment	40 00	
		1,876 00

Newsboys' Trial Board.

Salaries, Judges	\$78 00	
Salary, Clerk	26 00	
		104 00

Total, salaries of officers	<u><u>\$172,277 14</u></u>
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SALARIES OF JANITORS.

Normal Group:

Janitor	\$7,990 81	
Matron	656 14	
		\$8,646 95

Latin and High Schools:

English High and Public Latin	\$6,271 49
Brighton High	3,132 30
Charlestown High	3,031 60

Dorchester High:

Janitor	\$6,620 43
Matron	656 14
2 Portables	206 70
	<hr/>
	7,483 27

East Boston High	3,026 83
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Girls' High:

Janitor	\$5,053 55
Matron	656 14
	<hr/>
	5,709 69

High School of Commerce	5,005 32
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High School of Practical Arts:

Janitor	\$4,794 91
Matron	656 14
	<hr/>
	5,451 05

Hyde Park High	2,806 35
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Mechanic Arts High	7,171 96
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Roxbury High	4,093 19
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South Boston High:

Janitor	\$4,092 13
Matron	656 14
	<hr/>
	4,748 27

West Roxbury High:

Janitor	\$3,435 99
Matron	656 14
2 Portables	206 70
	<hr/>
	4,298 83

Normal, Latin and High Schools	<u>\$70,877 10</u>
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Normal, Latin and High Schools, as above	\$70,877 10
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233 Elementary School Buildings:

Janitors	\$301,321 96
Matrons (4)	2,624 96
126 Portables	13,236 75
	<hr/>
	317,183 67

Hired Accommodations:

Barnard Memorial	\$300 00
Lincoln House	100 00
	<hr/>
	400 00

Special Schools:

Horace Mann School:

Janitor	\$1,149 04
Matron	656 14
	<hr/>
	1,805 18

Trade School for Girls	\$2,123 18
Boston Trade School	5,365 72
Continuation School:	
25 La Grange Street	\$1,229 07
Brimmer Building	1,817 37
2 Portables	275 60
	<hr/>
	3,322 04
Boston Disciplinary Day School	564 98
Evening schools, existing schools	8,041 67
Summer Review schools	1,300 00
Supply Room, Dartmouth Street	516 75
218 Tremont Street (employment certificates, etc.)	510 57
Mason Street Building	2,173 00
Order of Court (Mrs. Agnes C. White)	530 00
Janitors on leave of absence	1,000 00
Temporary assistance	72 53
Janitor service, new buildings to be completed during the year	4,500 00
	<hr/>
Total, salaries of janitors	<u>\$420,286 39</u>

FUEL AND LIGHT.

Bituminous Coal:	
1,650 tons put into bins up to April 30, 1919	\$15,226 78
207 tons put into storage to April 30, 1919	1,921 66
Cost of storage and delivery of 3,833 tons up to April 30, 1919	8,442 75
Estimated cost of storage and delivery of 1,489 tons of coal in storage April 30, 1919	3,688 14
22,546 tons (estimated) to be delivered under contract subsequent to April 30, 1919,— average price, \$8.28	186,680 88
	<hr/>
Total for bituminous coal	\$215,960 21
Anthracite Coal:	
2,074 tons put into bins up to April 30, 1919	\$24,369 77
6,686 tons (estimated) to be delivered under contract subsequent to April 30, 1919,— average price, \$10.37	69,333 82
	<hr/>
Total for anthracite coal	93,703 59
359 cords of wood at \$17, including sawing, splitting and housing	6,103 00
100 bushels charcoal at \$0.45	45 00
Cost of expert services, advice, sampling, etc.	1,600 00
Cost of moving coal and wood	1,000 00
	<hr/>
Total for fuel	\$318,411 80

Gas	\$8,800 00	
Electric current for light	41,675 00	
Mazda lamps	150 00	
		<hr/>
Total for light		\$50,625 00
Electric current for power		9,125 00
		<hr/>
Total, fuel and light		<u>\$378,161 80</u>

SUPPLIES AND INCIDENTALS.

Normal School.

231 pupils at \$6	\$1,386 00	
Drawing supplies	100 00	
Manual training supplies	50 00	
Additional appropriation	500 00	
		<hr/>
Total for Normal School		\$2,036 00

Latin and High Schools.

15,503 pupils, as per schedule following, from \$3.54 per pupil to \$2.29 per pupil (average \$3.23)	\$50,480 87	
Manual training supplies (except Mechanic Arts High)	2,200 00	
Drawing supplies, art books, models, etc.	3,500 00	
Penmanship supplies and special materials	400 00	
Additional appropriations as follows:		
Mechanic Arts High	1,800 00	
Hyde Park High	400 00	
Brighton High	300 00	
Girls' High	500 00	
Commercial machines and rental of type- writers (218 now on rental, 51 to be rented during 1919, to take the place of expired loans)	9,550 00	
		<hr/>
Total for Latin and high schools		69,130 87

Elementary Schools.

Grades, 84,006 pupils, as per schedule follow- ing, from \$1.35 to \$0.85 per pupil (average \$1.25)	\$105,007 50	
Kindergartens, 6,789 pupils (average \$0.55)	3,733 95	
Supplies for additional kindergartens	250 00	
Supplies for connecting the work of the kinder- garten and the primary grades	75 00	
Allowance for established intermediate classes	3,283 30	

Additional appropriations as follows:

George Putnam	\$325 00
Henry L. Pierce	200 00
Hugh O'Brien	100 00
Lawrence	30 00
Oliver Wendell Holmes Intermediate	700 00
Martin	300 00
Edmund P. Tileston	100 00
Bunker Hill	200 00
Roger Wolcott	600 00
Allowance for intermediate classes (5,012 pupils at \$1)	5,012 00
Allowance for proposed intermediate classes (800 pupils at \$1)	800 00
Regular manual training supplies and equipment	22,000 00
Manual training supplies and equipment for prevocational classes	3,000 00
Manual training supplies and equipment for special classes	1,550 00
Manual training supplies and equipment for additional special classes	100 00
Manual training supplies and equipment for intermediate classes	850 00
Manual training supplies and equipment for ungraded classes	250 00
Manual training supplies and equipment for girls' classes	150 00
Manual training supplies and equipment — gardening	3,500 00
Drawing supplies and equipment for the grades, including vases, models, plants, charts and illustrative materials	13,298 00
Drawing supplies and equipment for special classes	300 00
Drawing supplies and equipment for prevocational classes	200 00
Cookery supplies and equipment for the grades,	6,000 00
Cookery supplies for special classes	1,000 00
Cookery supplies and equipment for prevocational classes	1,500 00
Sewing supplies for pupils unable to purchase them	200 00
Special class supplies	1,200 00
Penmanship supplies and special materials	1,400 00
Unassigned for special needs	10,000 00
Total for elementary schools	\$187,214 75

Boston Clerical School.

192 pupils at \$4.30	\$825 60
Additional allowance	320 00

\$1,145 60

Horace Mann School.

132 pupils at \$2.99 (exclusive of traveling expenses)	394 68
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Trade School for Girls (Day and Evening Classes).

Books, supplies and equipment, printing and postage, etc.	6,500 00
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Boston Trade School.

Books, supplies and equipment, printing and postage, etc.	5,855 22
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Boston Disciplinary Day School.

14 pupils at \$4.74	66 36
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Continuation School.

Books, supplies, printing and postage	6,500 00
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Evening Schools.

Supplies for existing schools	2,941 00
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Summer Review Schools.

Supplies for High Review School	\$60 00
Supplies for Elementary Review schools	420 00
Reimbursement to day schools for use of books and materials	200 00

680 00

Classes for Conservation of Eyesight.

Books, apparatus and supplies	500 00
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Speech Improvement Classes.

Books and supplies	500 00
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Music Appropriation.

Pianos, kindergarten	\$3,200 00
Pianos, halls	1,000 00
Pianos, special classes	1,800 00
Pianos, grade classes	1,800 00
Piano, Conservation of Eyesight Class	200 00
Piano, Speech Improvement Classes	200 00
Orchestral instruments	400 00
Metronomes	150 00
Dictaphone, Normal School	325 00
Repairs and regulation of pianos	35 00
Piano covers, stools and stands	100 00
Piano tuning and minor repairs	2,112 00
Moving pianos	150 00

11,472 00

Printing, Etc.

Printing and stock for same	\$20,000 00	
Advertising	300 00	
Records, proceedings, newspapers, etc.	2,500 00	
Account books, etc.	250 00	
	<hr/>	\$23,050 00

Janitors' Supplies.

Janitors' supplies	16,940 00
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Superintendent.

Stationery and office supplies, printing and postage	1,200 00
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Board of Superintendents.

Stationery and office supplies, printing and postage	350 00
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Secretary.

Stationery and office supplies, printing and postage	1,300 00
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Business Agent (Including Supply Room).

Stationery and office supplies, printing and postage	1,500 00
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Schoolhouse Custodian.

Stationery and office supplies, printing and postage	400 00
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Attendance Officers.

Stationery and office supplies, printing and postage	210 00
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Supervisor of Licensed Minors.

Stationery and office supplies, printing and postage	55 00
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Department of Practice and Training.

Books, pedagogical material and office supplies	250 00
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Department of Educational Investigation and Measurement.

Special printing and supplies for such investigations as may be approved by the School Committee during the year	\$375 00	
Supplies for testing	900 00	
Printing in connection with testing	375 00	
Office supplies and incidentals	200 00	
	<hr/>	1,850 00

Director of Household Science and Arts.

Books, pedagogical material and office supplies	200 00
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Director of Kindergartens.

Books, pedagogical material and office supplies	165 00
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Director of Special Classes.

Books, pedagogical material and office supplies	225 00
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Director of Salesmanship.

Books, pedagogical material, office supplies, etc.	\$225 00
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Director of Penmanship.

Books, pedagogical material, office supplies, etc.	50 00
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Director of Music.

Books, pedagogical material and office supplies	\$400 00	
Examiners of pupils, expenses	350 00	
		750 00

Director of Evening Schools.

Books, postage and office supplies	450 00
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Advisory Committee on Music.

Material, copying of music, postage, etc.	350 00
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Express Charges.

Express charges	800 00
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Transportation.

(a) Railroad and other fares (except street car tickets), Horace Mann School pupils	\$1,000 00	
(b) Car tickets as authorized by the Board	8,659 54	
		9,659 54

Tuition.

(a) Wards of the city	\$12,000 00	
(b) Others (pupils attending school in the Town of Brookline and in outside industrial and agricultural schools, etc.)	15,000 00	
		27,000 00

Miscellaneous.

(a) Diplomas	\$2,800 00
(b) Removing ashes and snow	2,500 00
(c) Surety bonds	70 00
(d) School Committee Contingent Fund	450 00
(e) Board of Superintendents' Contingent Fund, traveling expenses of Board of Superintendents and teachers of all ranks, educational magazines, books, lectures, etc.	1,260 00
(f) Assistance, teachers' examinations	1,400 00
(g) School exhibits	125 00
(h) Telephone and telegraph (exclusive of schools)	3,500 00
(i) Bath expenses	1,000 00
(j) Badges, licensed minors	175 00

(k) Professional and cultural courses for teachers	\$1,500 00	
(l) Promotional and improvement courses for teachers	500 00	
(m) Services of certified public accountants, auditing accounts	1,000 00	
(n) Services of experts to the Business Agent	1,300 00	
(o) Traveling expenses, Business Agent	200 00	
(p) Automobile supplies, equipment, repairs, etc.	1,200 00	
(q) Sundries	1,500 00	
		\$20,480 00
		\$402,396 02
Reduction in inventory		10,000 00
Total, supplies and incidentals		<u>\$392,396 02</u>

SCHEDULE FOR SUPPLIES AND INCIDENTALS FOR LATIN AND HIGH SCHOOLS,
1919-20.

Each school shall be allowed \$3.54 for each pupil up to 400; for all pupils in excess of 400 each school is to be allowed \$3.29 per pupil up to 800; for all pupils in excess of 800 each school is to be allowed \$3.04 per pupil up to 1,200; for all pupils in excess of 1,200 each school is to be allowed \$2.79 per pupil up to 1,600; for all pupils in excess of 1,600 each school is to be allowed \$2.54 per pupil up to 2,000; and for all pupils in excess of 2,000 each school is to be allowed \$2.29 per pupil.

It should be understood that the allowance per pupil is the same in all schools up to the limit of the number of pupils.

NUMBER OF PUPILS.	Allowance per Pupil.	Total Allowance.
Up to 400.....	\$3 54	\$1,416
401 to 800.....	3 29	2,732
801 to 1,200.....	3 04	3,948
1,201 to 1,600.....	2 79	5,064
1,601 to 2,000.....	2 54	6,080
2,001 and upwards.....	2 29	—

SCHEDULE FOR SUPPLIES AND INCIDENTALS FOR ELEMENTARY SCHOOLS —
GRADES, 1919-20.

Each school shall be allowed \$1.35 per pupil up to 600; for all pupils in excess of 600 each school is to be allowed \$1.25 per pupil up to 1,000; for all pupils in excess of 1,000 each school is to be allowed \$1.15 per pupil up to 1,400; for all pupils in excess of 1,400 each school is to be allowed \$1.05 per pupil up to 1,800; for all pupils in excess of 1,800 each school is to be allowed \$0.95 per pupil up to 2,200; for all pupils in excess of 2,200 each school is to be allowed \$0.85 per pupil.

It should be understood that the allowance per pupil is the same in all schools up to the limit of the number of pupils.

NUMBER OF PUPILS.	Allowance per Pupil.	Total Allowance.
Up to 600.....	\$1 35	\$810
601 to 1,000.....	1 25	1,310
1,001 to 1,400.....	1 15	1,770
1,401 to 1,800.....	1 05	2,190
1,801 to 2,200.....	95	2,570
2,201 and upwards.....	85	—

PHYSICAL EDUCATION.

Salaries.

Director of Physical Training	\$3,220 00
Clerk	936 00
Temporary Clerical Assistance	250 00
Instructor in Military Drill	2,214 00
1 Assistant Instructor in Military Drill from June 10	1,005 00
2 Assistant Instructors in Military Drill from September 1	1,200 00
1 Assistant Instructor in Military Drill from May 12	903 06
Armorer	1,440 00
13 Instructors, Physical Training	21,072 26
1 Instructor, Physical Training, from Sep- tember 1	476 00
10 Assistant Instructors, Physical Training	12,076 84
11 Teacher Coaches at \$4 per session (maxi- mum number of days, 200 for each)	8,800 00
1 Teacher Coach from April 1 (115 days at \$4)	460 00
1 Pianist at \$1.50 per day	120 00
2 Temporary Instructors in Military Drill at \$8 per day (101 days)	1,616 00
1 Temporary Instructor of Drum and Bugle Corps, signalling and armorer, Latin and day high schools, at \$8 per day (101 days)	808 00

\$56,597 16

Supplies and Equipment.

Office supplies, postage, printing and inci- dentals	\$2,400 00
Supplies, equipment and incidentals, high school athletics, six schools	1,300 00
Military supplies and annual parade	6,400 00
Rifle practice for high school pupils	700 00

Supplies for gymnastics, games and play; new apparatus and equipment and repairs on same	\$2,500 00
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\$13,300 00

PLAYGROUNDS.

Salaries.

Salaries of Playground Supervisors and Teachers, existing basis	\$27,626 95
Salaries of Playground Supervisors and Teachers, additional playgrounds	1,700 00
Salaries of Janitors	5,245 04

34,571 99

Supplies and Equipment.

New apparatus, repairs on apparatus, and supplies for games and play	7,000 00
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Total, Physical Education	<u>\$111,469 15</u>
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SCHOOL PHYSICIANS AND NURSES.

MEDICAL INSPECTION.

Salaries.

Director	\$2,616 00
Medical Inspector	2,124 00
44 School Physicians	26,400 00
1 School Physician	996 00
Temporary School Physicians	2,061 00
Clerk	1,080 00
Salary adjustments	128 00

\$35,405 00

Supplies and Incidentals.

Special outfits, charts and apparatus	\$100 00
Supplies, postage and office incidentals	500 00
Printing	250 00

850 00

NURSES.

Salaries.

1 Supervising Nurse	\$1,620 00
41 School Nurses	42,209 60
2 additional School Nurses, one from Janu- ary 1 and one from April 1	2,010 00

45,839 60

Supplies and Incidentals.

Supplies	\$350 00
Car tickets	1,000 00

Postage, printing, office supplies and incidentals	\$300 00	
		\$1,650 00
Total, School Physicians and Nurses		<u>\$83,744 60</u>

PENSIONS TO TEACHERS.

For pensions to retired teachers and payments to the Trustees of the Permanent Pension Fund, the amount available under chapter 589 of the Acts of 1908, chapter 617 of the Acts of 1910, and chapter 304 of the Acts of 1915, viz., 7 cents on each \$1,000 of the valuation of the city		<u>\$106,325 73</u>
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PENSIONS TO ATTENDANCE OFFICERS AND JANITORS.

Pensions to 2 retired attendance officers and 10 retired janitors	\$6,637 20	
Proposed pensions to janitors now in the service	1,500 00	
		<u>\$8,137 20</u>

EXTENDED USE OF THE PUBLIC SCHOOLS.

Salaries, Administration.

Director	\$3,420 00	
Clerk	756 00	
		<u>\$4,176 00</u>

Supplies and Incidentals, Administration.

Office supplies	\$225 00	
Advertising, printing, tickets, etc.	200 00	
New office equipment	—	
		<u>425 00</u>

Salaries, Centers and Other Activities.

Managers	\$6,000 00	
Assistant managers	3,500 00	
Leaders, helpers, matrons	6,700 00	
Lectures, concerts, entertainments, patriotic meetings, etc.	2,500 00	
		<u>18,700 00</u>

Janitors' Salaries, Centers and Other Activities.

Centers	\$2,800 00	
Schoolhouse accommodations	1,600 00	
Lectures, concerts, entertainments, patriotic meetings, etc.	500 00	
		<u>4,900 00</u>

Supplies and Equipment, Centers and Other Activities.

Supplies	\$500 00	
Equipment	1,675 00	
Supplies and incidentals for lectures, con- certs, entertainments, patriotic meetings, etc.	1,000 00	
		<u>\$3,175 00</u>

Reserve.

Reserve for permanent equipment, etc.	7,758 86	
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Total, Extended Use of the Public Schools	<u>\$39,134 86</u>
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Estimated amount available under chapter 195 of the Acts of 1912, viz., 2 cents on each \$1,000 of the valuation of the city	\$30,378 78	
Unexpended balance, appropriation 1918-19	<u>8,756 08</u>	
		<u>\$39,134 86</u>

REPAIRS AND ALTERATIONS.

(To be Expended by the Schoolhouse Department.)

Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures (35 cents per \$1,000 average valuation)	\$531,628 63	
Equipment and apparatus for nurses' rooms	<u>500 00</u>	
		<u>\$532,128 63</u>

AMERICANIZATION.

DAY SCHOOL FOR IMMIGRANTS.

Salaries.

Salaries of teachers	\$4,002 93	
Special Assistants now em- ployed	1,810 00	
Salaries of teachers, proposed classes	5,817 50	
Salaries of janitors	<u>1,000 00</u>	
		\$12,630 43

Supplies and Incidentals.

Books and supplies, printing and postage	<u>200 00</u>	
		\$12,830 43

EVENING ELEMENTARY SCHOOLS.

Salaries.

Salaries of teachers	\$11,072 95	
Salaries of janitors	<u>2,458 33</u>	
		\$13,531 28

Supplies and Incidentals.

Supplies and Incidentals	\$459 00	\$13,990 28
Total, Americanization		<u>\$26,820 71</u>

VOCATIONAL GUIDANCE.

SALARIES.

Director	\$2,100 00	
3 Vocational Assistants	4,908 00	
2 additional Vocational Assistants from May 1	1,968 00	
1 Temporary Vocational Assistant	970 00	
Clerk	1,020 00	
1 additional Clerk from May 20	515 66	
Salary adjustments	64 00	
Salaries of janitors	255 28	
		\$11,800 94

SUPPLIES AND INCIDENTALS.

Supplies, car fares, postage, etc., in connection with vocational guidance		375 00
Total, Vocational Guidance		<u>\$12,175 94</u>

SUMMARY.

The foregoing estimates call for appropriations (which aggregate the total amount the School Committee may appropriate) as follows:

Salaries of instructors	\$5,180,865 96
Salaries of officers	172,277 14
Salaries of janitors	420,286 39
Fuel and light	378,161 80
Supplies and incidentals	392,396 02
Physical education	111,469 15
School physicians and nurses	83,744 60
Pensions to teachers	106,325 73
Pensions to attendance officers and janitors	8,137 20
Extended use of the public schools	39,134 86
Americanization	26,820 71
Vocational Guidance	12,175 94
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	532,128 63
Total	<u>\$7,463,924 13</u>

On April 7, 1919, the School Committee appropriated the following sums on account:

Salaries of instructors	\$2,400,000 00
Salaries of officers	85,000 00

Salaries of janitors	\$182,000 00
Fuel and light	225,000 00
Supplies and incidentals	200,000 00
Physical education	40,000 00
Salaries and expenses of nurses	20,000 00
Medical inspection	18,000 00
Pensions to teachers	65,000 00
Pensions to attendance officers and janitors	4,000 00
Extended use of the public schools	15,000 00
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	300,000 00
Rents of hired school accommodations	20,000 00
	<u>\$3,574,000 00</u>

On June 16, 1919, the School Committee appropriated the following additional sums on account:

Salaries of instructors	\$1,220,000 00
Salaries of officers	25,000 00
Salaries of janitors	65,000 00
Fuel and light	50,000 00
Supplies and incidentals	16,000 00
Physical education	20,757 56
Physical education, special	9,242 44
Salaries and expenses of nurses	12,000 00
Medical inspection	6,000 00
Pensions to teachers	14,000 00
Pensions to attendance officers and janitors	1,000 00
Extended use of the public schools	5,000 00
	<u>\$1,444,000 00</u>

It is therefore necessary to appropriate the balances of the amounts set forth in the foregoing estimates, and the following order carries this intention into effect:

Ordered, That to meet the current expenses of the School Committee and to provide funds for the alteration and repair of school buildings, pensions to teachers, etc., during the financial year February 1, 1919 to January 31, 1920, the following sums are hereby appropriated for the purposes stated, in addition to those appropriated on account on April 7, 1919, and June 16, 1919:

For general school purposes:

Salaries of instructors	\$1,540,865 96
Salaries of officers	62,277 14
Salaries of janitors	173,286 39
Fuel and light	103,161 80
Supplies and incidentals	176,396 02
Pensions to attendance officers and janitors	3,137 20

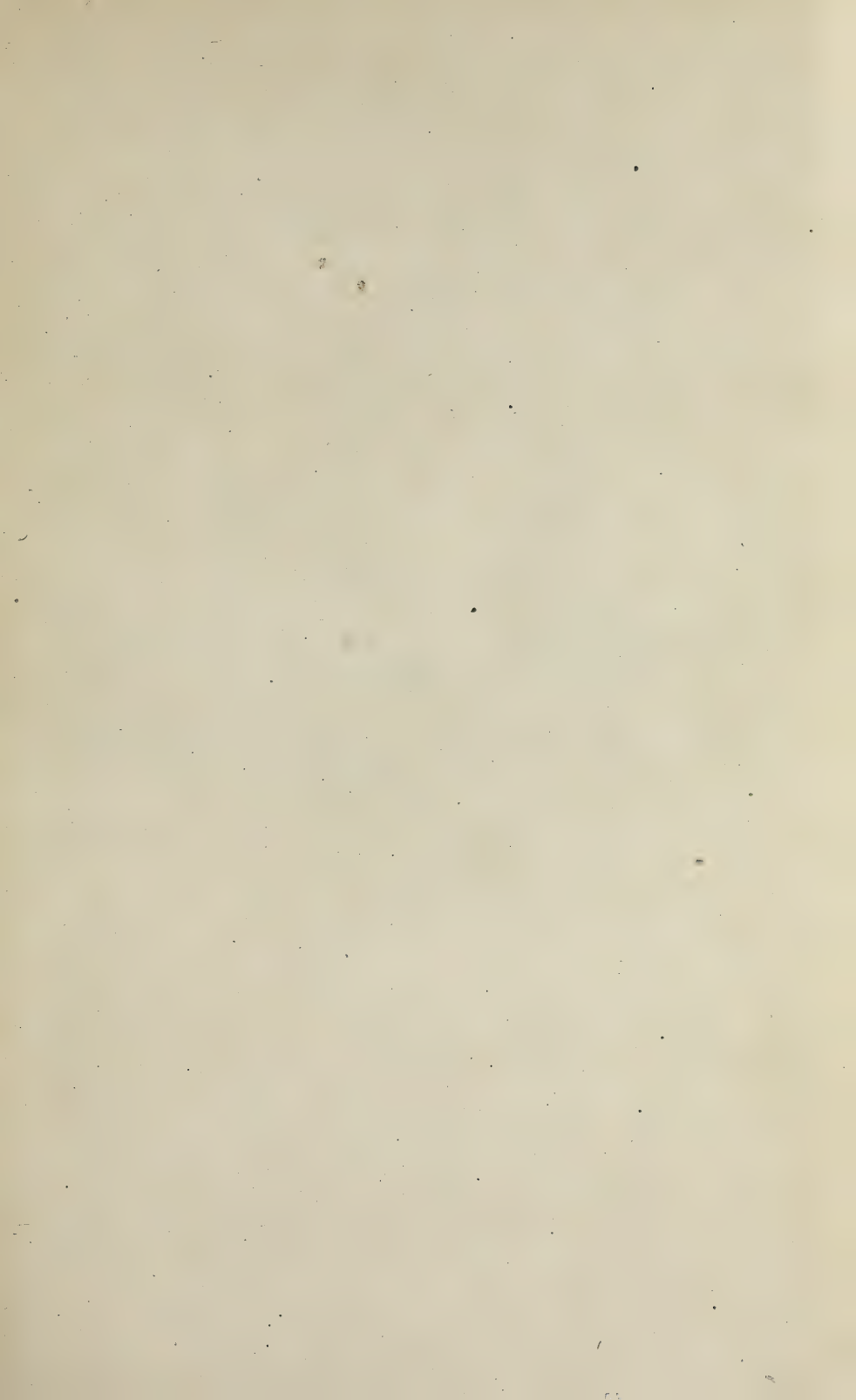
For the alteration and repair of school buildings, and for furniture, fixtures, and means of escape in case of fire, and for fire protection for existing buildings, and for improving existing school yards	\$232,128 63
Physical education	41,469 15
School physicians and school nurses	27,744 60
Extended use of the public schools	19,134 86
Pensions to teachers	27,325 73
Promotion of Americanization	26,820 71
Vocational guidance	12,175 94
	<hr/>
	<u>\$2,445,924 13</u>

Ordered, That the sum of \$20,000 be transferred from the item "Rents of Hired School Accommodations" in the appropriation order passed April 7, 1919, to the item "For General School Purposes — Salaries of Instructors" in the annual appropriation order.

Ordered, That the City Auditor is hereby instructed to charge the cost of all rents of hired school accommodations for the current financial year against the appropriation for land and buildings, in accordance with section 1 of chapter 206 of the Special Acts of 1919.

Ordered, That the City Auditor is hereby instructed to charge the cost of all expenditures for salaries and expenses of nurses and for medical inspection during the current financial year to the appropriation "School Physicians and School Nurses" in the annual appropriation order, in accordance with section 1 of chapter 206 of the Special Acts of 1919.

The foregoing orders appropriating the sum of \$7,463,924.13 for the purposes stated were passed by the School Committee on April 7, June 16 and July 14, 1919, and were approved by his Honor the Mayor on April 12, June 27 and July 19, 1919.





TOTAL AND PER CAPITA COSTS

OF SCHOOLS AND ALL OTHER ACTIVITIES

Item	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16
Salaries	100.00	110.00	120.00	130.00	140.00	150.00
Supplies	20.00	22.00	24.00	26.00	28.00	30.00
Repairs	10.00	11.00	12.00	13.00	14.00	15.00
Travel	5.00	5.50	6.00	6.50	7.00	7.50
Postage	2.00	2.20	2.40	2.60	2.80	3.00
Telephone	1.00	1.10	1.20	1.30	1.40	1.50
Light and Heat	15.00	16.00	17.00	18.00	19.00	20.00
Interest	3.00	3.30	3.60	3.90	4.20	4.50
Depreciation	8.00	8.80	9.60	10.40	11.20	12.00
Other	1.00	1.10	1.20	1.30	1.40	1.50
Total	162.00	175.10	188.20	201.30	214.40	227.50
Per Capita	1.62	1.75	1.88	2.01	2.14	2.27

SHEET NO. 1.

TOTAL AND PER CAPITA COSTS OF SCHOOLS AND ALL OTHER ACTIVITIES.

INCLUDING COSTS OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES, AND WITH
INCOME DEDUCTED.

Item	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16
Salaries	100.00	110.00	120.00	130.00	140.00	150.00
Supplies	20.00	22.00	24.00	26.00	28.00	30.00
Repairs	10.00	11.00	12.00	13.00	14.00	15.00
Travel	5.00	5.50	6.00	6.50	7.00	7.50
Postage	2.00	2.20	2.40	2.60	2.80	3.00
Telephone	1.00	1.10	1.20	1.30	1.40	1.50
Light and Heat	15.00	16.00	17.00	18.00	19.00	20.00
Interest	3.00	3.30	3.60	3.90	4.20	4.50
Depreciation	8.00	8.80	9.60	10.40	11.20	12.00
Other	1.00	1.10	1.20	1.30	1.40	1.50
Total	162.00	175.10	188.20	201.30	214.40	227.50
Per Capita	1.62	1.75	1.88	2.01	2.14	2.27



TOTAL AND PER CAPITA COSTS OF SCHOOLS AND ALL OTHER ACTIVITIES.*
INCLUDING COSTS OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH INCOME DEDUCTED.

	Normal School.	Latin and High Schools.	Elementary Schools.	Speech Improvement Classes.	Boston Clerical School.	Boston Disciplinary Day School.	Horace Mann School.	Trade School for Girls.*	Boston Trade School, Day Classes.	Continuation School, Voluntary.	Continuation School, Compulsory.	Day School for Immigrants.	Summer Review High School.	Summer Review Elementary Schools.	Evening High Schools.	Evening Elementary Schools.	Boston Trade School, Evening Classes.	Park Playgrounds.	Schoolyard Playgrounds.	Farm Service.	School Centers.	Use of School Accommodations.	
Cost, exclusive of administration, supervision and general charges.....	\$48,082 10	\$1,340,428 80	\$3,890,394 67	\$11,940 32	\$17,079 69	\$2,191 93	\$29,983 44	\$62,231 99	\$40,852 20	\$442 71	\$79,999 29	\$3,991 43	\$3,214 98	\$14,751 88	\$29,725 80	\$25,218 16	\$6,355 19	\$20,218 53	\$15,616 17	\$49 70	\$18,782 35	\$2,272 37	Cost, exclusive of administration, supervision and general charges.
Average membership.....	243	14,980	86,966	189	14	137	196	196	196														Average membership.
Cost per pupil, direct charges only (on average membership).....	\$197 87	\$89 48	\$44 84	\$90 37	\$156 57	\$218 56	\$239 04	\$239 04	\$239 04														Cost per pupil, direct charges only (on average membership).
Average attendance.....	233	13,324	77,988	169	9	110	173	173	173				294	4,056	2,250	1,511	270	6,832	4,068		3,129	\$46,354	Average attendance.
Cost per pupil, direct charges only (on average attendance).....	\$206 36	\$96 96	\$50 00	\$101 06	\$243 55	\$251 96	\$270 82	\$270 82	\$270 82				\$10 94	\$3 64	\$13 21	\$16 69	\$23 54	\$2 96	\$3 84		\$6 00	\$0 049	Cost per pupil, direct charges only (on average attendance).
Number of pupil hours.....	221,697	12,306,016	66,900,861	152,014	10,615	103,724	272,068	173,264	2,014	562,092	28,724	47,040	486,720	198,834	167,306	17,446					264,963		Number of pupil hours.
Cost per pupil hour.....	\$0 213	\$0 108	\$0 058	\$0 112	\$0 206	\$0 239	\$0 270	\$0 270	\$0 270	\$0 142	\$0 138	\$0 068	\$0 030	\$0 149	\$0 150	\$0 364					\$0 070		Cost per pupil hour.
Cost per pupil per session, direct charges only (on average attendance).....																		\$0 016	\$0 027				Cost per pupil per session, direct charges only (on average attendance).
Above cost brought down.....	\$48,082 16	\$1,340,428 89	\$3,890,394 67	\$11,940 32	\$17,079 69	\$2,191 93	\$29,983 44	\$62,231 99	\$40,852 20	\$442 71	\$79,999 29	\$3,991 43	\$3,214 98	\$14,751 88	\$29,725 80	\$25,218 16	\$6,355 19	\$20,218 53	\$15,616 17	\$49 70	\$18,782 35	\$2,272 37	Above cost brought down.
Cost of administration, supervision and general charges.....	1,503 58	56,235 53	271,602 59	552 60	726 43	599 71	769 06	2,551 85	1,446 09	194 18	5,429 81	1,495 01	251 04	1,218 98	3,497 12	4,872 39	611 69	885 84	853 55		3,550 83	308 77	Cost of administration, supervision and general charges.
Total cost.....	\$49,585 74	\$1,396,664 42	\$4,170,997 26	\$12,492 92	\$17,806 12	\$2,791 64	\$30,752 50	\$64,783 84	\$42,298 80	\$636 89	\$85,429 10	\$5,486 44	\$3,466 02	\$15,970 86	\$33,222 92	\$30,090 55	\$6,967 08	\$21,104 37	\$16,469 72	\$49 70	\$22,333 18	\$2,581 14	Total cost.
Cost per pupil, total (on average membership).....	\$205 29	\$93 24	\$47 72	\$94 21	\$199 40	\$224 47	\$240 42	\$240 42	\$240 42														Cost per pupil, total (on average membership).
Cost per pupil, total (on average attendance).....	\$214 10	\$101 03	\$53 18	\$105 36	\$310 18	\$258 42	\$270 18	\$270 18	\$270 18				\$11 79	\$3 94	\$14 76	\$19 91	\$25 80	\$3 09	\$4 05		\$7 14	\$0 055	Cost per pupil, total (on average attendance).
Cost per pupil hour, total.....	\$0 222	\$0 113	\$0 061	\$0 117	\$0 262	\$0 296	\$0 237	\$0 278	\$0 316	\$0 151	\$0 191	\$0 073	\$0 032	\$0 167	\$0 179	\$0 399					\$0 084		Cost per pupil hour, total.
Cost per pupil per session, total (on average attendance).....																		\$0 016	\$0 028				Cost per pupil per session, total (on average attendance).
Above total cost brought down.....	\$49,585 74	\$1,396,664 42	\$4,170,997 26	\$12,492 92	\$17,806 12	\$2,791 64	\$30,752 50	\$64,783 84	\$42,298 80	\$636 89	\$85,429 10	\$5,486 44	\$3,466 02	\$15,970 86	\$33,222 92	\$30,090 55	\$6,967 08	\$21,104 37	\$16,469 72	\$49 70	\$22,333 18	\$2,581 14	Above total cost brought down.
Number of non-resident pupils.....	3	40	10	1			7							2									Number of non-resident pupils.
Average number of pupil hours, non-resident pupils.....	2,937	39,160	8,900	890			9,345							240									Average number of pupil hours, non-resident pupils.
Deduct tuition received for non-resident pupils.....	\$365 00	\$3,559 39	\$109 75	\$81 50			\$2,727 00							\$8 00									Deduct tuition received for non-resident pupils.
Number of resident pupils (on average membership).....	240	14,940	87,394	188	14	137	180	180	180														Number of resident pupils (on average membership).
Number of resident pupils (on average attendance).....	230	13,784	78,416	168	9	119	167	167	167				294	4,054	2,250	1,511	270	6,832	4,068		3,129	\$46,354	Number of resident pupils (on average attendance).
Number of pupil hours, resident pupils.....	221,700	12,266,856	67,276,211	151,124	10,615	103,724	272,068	163,919	2,014	562,092	28,724	47,040	486,480	198,834	167,306	17,446					264,963		Number of pupil hours, resident pupils.
Total cost of resident pupils.....	\$49,320 74	\$1,393,105 03	\$4,170,797 51	\$12,492 92	\$17,724 02	\$2,791 64	\$30,752 50	\$64,783 84	\$45,571 89	\$636 89	\$85,429 10	\$5,486 44	\$3,466 02	\$15,962 86	\$33,222 92	\$30,090 55	\$6,967 08	\$21,104 37	\$16,469 72	\$49 70	\$22,333 18	\$2,581 14	Total cost of resident pupils.
Cost per resident pupil, total (on average membership).....	\$205 50	\$93 25	\$47 72	\$94 28	\$199 40	\$224 47	\$241 12	\$241 12	\$241 12														Cost per resident pupil, total (on average membership).
Cost per resident pupil, total (on average attendance).....	\$214 44	\$101 07	\$53 19	\$105 50	\$310 18	\$258 42	\$272 80	\$272 80	\$272 80				\$11 79	\$3 94	\$14 76	\$19 91	\$25 80	\$3 09	\$4 05		\$7 14	\$0 055	Cost per resident pupil, total (on average attendance).
Cost per pupil hour, resident pupils.....	\$0 222	\$0 113	\$0 061	\$0 117	\$0 262	\$0 296	\$0 237	\$0 278	\$0 316	\$0 151	\$0 191	\$0 073	\$0 032	\$0 167	\$0 179	\$0 399					\$0 084		Cost per pupil hour, resident pupils.
Cost per resident pupil per session, total (on average attendance).....																		\$0 016	\$0 028				Cost per resident pupil per session, total (on average attendance).
Cost of resident pupils brought down.....	\$49,320 74	\$1,393,105 03	\$4,170,797 51	\$12,492 92	\$17,724 02	\$2,791 64	\$30,752 50	\$64,783 84	\$45,571 89	\$636 89	\$85,429 10	\$5,486 44	\$3,466 02	\$15,962 86	\$33,222 92	\$30,090 55	\$6,967 08	\$21,104 37	\$16,469 72	\$49 70	\$22,333 18	\$2,581 14	Cost of resident pupils brought down.
Deduct income.....	160 10	4,922 64	23,730 69	80 04	80 05	26 68	20,121 14	\$30,823 40	\$20,029 68	817 59	\$32,668 91	26 68	26 68	160 10	4,113 48	6,026 09	4,935 00						Deduct income.
Net cost of resident pupils.....	\$49,160 64	\$1,388,182 39	\$4,147,066 82	\$12,412 88	\$17,644 57	\$2,764 96	\$1,631 36	\$24,960 44	\$24,942 21	\$180 70	\$52,760 10	\$5,459 76	\$3,439 34	\$15,802 76	\$29,109 44	\$23,464 46	\$2,032 08	\$21,104 37	\$16,469 72	\$49 70	\$22,333 18	\$2,581 14	Net cost of resident pupils.
Net cost per resident pupil (on average membership).....	\$204 84	\$92 92	\$47 45	\$93 85	\$197 50	\$211 91	\$131 97	\$131 97	\$131 97														Net cost per resident pupil (on average membership).
Net cost per resident pupil (on average attendance).....	\$213 74	\$100 71	\$52 89	\$105 03	\$307 22	\$13 71	\$140 35	\$140 35	\$140 35				\$11 70	\$3 90	\$12 94	\$15 53	\$7 53	\$3 09	\$4 05		\$7 14	\$0 055	Net cost per resident pupil (on average attendance).
Net cost per pupil hour, resident pupils.....	\$0 221	\$0 113	\$0 061	\$0 116	\$0 260	\$0 015	\$0 091	\$0 162	\$0 093	\$0 190	\$0 073	\$0 032	\$0 140	\$0 140	\$0 116						\$0 084		Net cost per pupil hour, resident pupils.
Net cost per resident pupil per session (on average attendance).....																		\$0 016	\$0 028				Net cost per resident pupil per session (on average attendance).

* Including day, summer and extension classes.

† Per capita cost.

‡ Total attendance.

§ That part of the total cost coming from the School Committee's share of the tax levy.

|| Amount by which income exceeds total cost.

‡ Including the cost of tuition of pupils in the schools of Brookline, Dedham and Winthrop and of wards of the city placed in other cities and towns; the average number — 438 — and the total pupil hours — 383,260 — of such pupils should be added to the average membership, average attendance and number of pupil hours, making a total of 87,404 pupils on average membership, 78,426 on average attendance and 67,284,111 pupil hours.

The cost of tuition of pupils, residents of the City of Boston, attending industrial and agricultural schools in other cities and towns, amounting to \$564.10, is included under general charges, but the number of such pupils (10) is not included in the average membership or average attendance of any of the above schools.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

‡ Cost for resident and non-resident pupils.

§ Half the net cost of maintenance as aid from the Commonwealth for the period September 1, 1916, to August 31, 1917, \$26,966.20; tuition, \$3,728.96; sale of products, \$8,723.63; interest on deposits, \$19.72; telephone charges, \$7.80; miscellaneous items, \$322.09; forfeited advance payments, Evening Trade School, and interest on same, \$35; total, \$39,823.40.

|| Half the net cost of maintenance as aid from the Commonwealth for the period September 1, 1916, to August 31, 1917, \$18,928.41; sale of products, \$274.62; work done for Schoolhouse Commission, \$1,260.55; miscellaneous items, \$100.10; total, \$20,629.08.

‡ Half the net cost of maintenance as aid from the Commonwealth for the period September 1, 1916, to August 31, 1917, \$30,822.67; sale of products, \$1,267.85; work done for Schoolhouse Commission, \$108.08; miscellaneous items, \$480.31; total, \$32,668.91.

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Cost per pupil, direct charges only (on average membership)

Cost per pupil, total (on average attendance)

Cost per pupil

Cost per pupil

Cost per pupil

Cost per pupil, total (on average attendance)

Cost per pupil, total (on average attendance)

Cost per session, total (on average attendance)

Above total cost per pupil

Number of non-resident pupils

of pupil hours

(deduct tuition reserved for)

Number of resident pupils for

Number of resident

Number of pupil hours resident

Total cost of

Cost per resident pupil, total (on average membership)

Cost per resident pupil, total (on average attendance)

Cost per pupil hour, resident pupil

Cost per session, total (on average attendance)

Cost of resident pupils brought down

Cost

Net cost of resident pupils

Net cost of resident pupils for

Net cost of resident pupils for

Net cost of resident pupils for

[illegible][illegible][illegible][illegible]

Net cost per pupil, resident	
Net cost per pupil, non-resident	
Net cost per pupil, total (on average attendance)	
Net cost per pupil, total (on average membership)	
Net cost of resident pupils	
Net cost of non-resident pupils	
Net cost of total pupils brought down	
Cost per pupil hour, resident	
Cost per pupil, resident (on average attendance)	
Cost per resident pupil, total (on average attendance)	
Cost per resident pupil, total (on average membership)	
Total cost of resident pupils	
Number of resident pupils (on average attendance)	
Number of resident pupils (on average membership)	
Deduct tuition received for non-resident pupils	
Average number of pupil hours, non-resident pupils	
Number of non-resident pupils	
Above total cost brought down	
Cost per pupil hour, total (on average attendance)	
Cost per pupil hour, total (on average membership)	
Cost per pupil, total (on average attendance)	
Cost per pupil, total (on average membership)	
Total cost	
Cost of administration, supervision and	
Above cost brought down	
Cost per pupil per session, direct charges only	
Cost per pupil hour	
Number of pupils	
Cost per pupil, direct charges only (on average attendance)	
Average membership	
Set, exclusive of administration, supervision and	

NORMAL SCHOOL

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																	OPERATION OF PLANT.						PROMOTION OF HEALTH.						Total.*	Average Membership.	Cost per Average Attendance.*	Average Attendance.	Cost per Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOL.			
	Salary of Head Master.	Salary of Clerk.	Travel.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies.	Manual Training Supplies.	Commercial Supplies.	Laboratory Supplies.	Musical Supplies.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total for Instruction.	Number of Pupils.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.	Salaries of Inspectors.	Supplies of Medical Inspection.									Nurses' Salaries.	Nurses' Supplies and Incidentals.	Total for Promotion of Health.
Normal, Lowell, Mass.	\$4,110.00	\$814.05	\$22.76	\$96.03	\$41,735.33	\$1,320.18	\$293.55	\$394.25	\$104.43	\$20.66	\$49.31	\$109.91	\$1.28	\$28.23	\$985.03	\$72.97	\$7.81	\$46,542.04	224,697	\$0.189	\$2,953.16	\$3,938.65	\$284.83	\$22.85	\$36.10	\$87.11	\$7,352.68	\$175.83	\$1.61	\$177.44	\$48,032.16*	243	\$197.87*	232	\$206.36*	224,697	\$0.218*	Normal.

¹ Including salary of matron.

LATIN AND HIGH SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

Salaries of Masters.		Salaries of Clerks.		Postage.		Telephone.		EXPENSES OF INSTRUCTION.																OPERATION OF PLANT.					PROMOTION OF HEALTH.										Total.		Average Month's Average Salary.		Cost per Average Month's Average Salary.		Average Month's Average Salary.		Cost per Average Month's Average Salary.		Number of Hours.		Cost per Hour.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
								Salaries of Teachers.	Salaries of Physical Teachers, including Military Drill.	Text Books.	Supplementary Reference Books.	Drawing and Equipment.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies and Equipment.	Commercial Supplies and Equipment.	Laboratory Supplies and Equipment.	Music Supplies and Instruments.	Printing.	Miscellaneous Supplies.	Physical Training Supplies.	Incidentals.	Total for Instruction.	Number of Pupils.	Cost per Pup. Hour of Instruction.	Salaries of Janitors.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.	Subsist. Medical Inspection.	Supplies Medical Inspection.	Nurses' Salaries.	Nurses' Supplies and Incidentals.	Total for Promotion of Health.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
\$1,116.00	\$741.20	\$80.20	\$34.11	\$70,987.20	\$1,000.00	\$1,624.75	\$137.35	\$1.00	\$4.00			\$12.24	\$101.04	\$0.00	\$20.81	\$1,032.03	\$330.05		47.02	1.01	\$1,255.73	\$7,610.20	\$2,004.14	\$2,931.02	\$303.95	\$4.30	\$2.68	\$5.15	\$8.23	\$5.00	\$2,292.37	\$264.20	\$1.08	\$2,556.57	\$7,237.31	130	\$54.14	\$55	\$99.14	\$94,944	\$9.100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
4,110.00	209.07	44.08	26.07	42,227.24	1,706.48	1,174.00	34.54	21.71	123.17	1,080.62	\$99.00	772.14	271.48	76.14	870.02	560.08	8.98	42,209.20	47,328.03	054	2,831.70	2,543.80	225.92	245.41	152.83	156.83	4,056.57	197.74	9.61	181.28	48,847.05	507	\$11.15	\$41	\$4.50	\$47,625	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4,110.00	807.99	31.70	11.00	31,227.14	2,441.70	1,160.64	21.78	167.85	1,486.62	129.75	\$0.20	87.32	263.74	72.64	488.28	377.09	7.77	264.48	30,921.25	054	3,740.64	4,449.70	245.92	245.41	152.83	156.83	4,056.57	197.74	9.61	181.28	48,847.05	507	\$11.15	\$41	\$4.50	\$47,625	1000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4,110.00	1,253.12	55.97	43.49	112,715.01	3,773.54	2,274.72	39.60	106.60	27.03			161.45	873.90	370.30	5.00	34.80	1,742.33	224.75	4.12	12,049.33	11,707.02	105	1,670.99	2,399.00	984.32	158.09		281.70	12,551.09	566.74	3.20	270.27	142,920.20	1,908	\$11.15	1,297	79.50	\$1,070.02	1100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
4,110.00	665.45	100.30	30.43	44,720.39	3,635.58	1,005.51	20.80	153.51	228.17	100.10		5.74	1,101.01	328.70	18.20	671.38	875.75	3.27	10,031.37	5,013.12	105	2,848.12	2,399.25	246.77	18.20	45.13	122.74	5,883.21	2.00	187.74	42,794.87	600	\$12.92	608	103.25	\$60,312	1100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3,720.00	2,000.77	80.67	118.77	144,475.00	3,010.60	5,023.38	153.05	01.89	53.00			1,087.04	023.25	75.50	2,007.43	851.15	23.57	10,031.37	1,013,844	099	4,833.47	0,077.32	947.40	425.60	111.16	189.07	12,628.94	533.48	1.08	66.56	12,707.05	1,857	\$12.92	1,760	90.42	\$1,024,844	1070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4,110.00	1,567.20	84.68	61.14	76,966.83	2,467.84	2,127.88	247.30	239.10	3.39			90.77	241.39	10.06	41.74	2,049.19	71.14	53.07	10,767.40	1,459,060	077	1,639.56	3,077.31	1,322.25	360.00	107.09	381.27	10,870.63	478.85	1.08	65.08	13,812.02	1,788	\$12.92	1,760	90.42	\$1,024,844	1070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
4,110.00	964.77	49.39	59.63	65,587.15	1,720.00	784.73	185.20	11.67	10.00			1,421.51	232.33	85.09	2,580.95	21.11	12.38	10,761.01	1,110,637	060	4,713.12	5,857.37	330.00	200.19	80.31	191.10	11,608.14	176.82	1.01	177.43	11,037.97	1,243	\$12.92	1,194	90.34	\$1,103,877	1070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4,110.00	819.03	49.37	52.62	50,831.74	1,432.50	300.75	64.00	558				429.28	226.76	200.00	88.76	835.52	458.72	13.60	4,547.09	554,128	086	2,433.12	3,305.55	422.30	97.30	191.55	5,563.27	174.14	1.01	248.49	6,0812.61	478	\$16.00	483	161.22	\$42,230	1600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3,668.00	807.47	27.81	22.29	37,065.12	2,019.01	1,120.21	307.26	360.42	110.08			132.10	1,054.42		35.60	1,021.69	Cr. 133.94	49.00	158,900.86	747,684	173	5,517.28	3,160.00	333.21	113.01	44.83	297.14	12,862.80	170.33	1.02	179.10	14,563.01	673	\$12.92	620	85.68	\$53,128	0800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
4,110.00	1,629.00	60.37	48.72	110,839.53	135.00	520.70	132.70	13.48	10.00			106.26	245.44	47.95	680.29	79.81	27.22	4,523.10	439,320	130	5,110.28	4,052.08	110.19	233.09	143.00	250.94	10,359.05	210.93	1.01	177.43	11,037.97	1,243	\$12.92	1,194	90.34	\$1,103,877	1070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3,668.00	502.00	24.45	22.85	56,758.58	1,274.00	727.91	106.29	110.06	13.06	2.23		72				760.48	693.70	75	21.25	701.75	331.31	0.28	585.60	713,002	052	1,434.91	2,490.74	327.55	110.67	40.60	145.68	7,343.76	203.01	3.26	100.00	16,544.60	825	\$8.50	777	85.29	\$13,000.00	0800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
3,720.00	819.03	81.73	61.00	41,960	1,467.00	986.50	104.60	103.49	46.00			740.48	693.70	75	21.25	701.75	885.75	0.28	80,004.46	657,937	091	1,384.03	2,490.74	377.22	299.01	112.40	143.68	7,343.76	106.68	3.93	100.00	16,544.60	825	\$8.50	777	85.29	\$13,000.00	0800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
3,674.20	725.37	37.74	30.67	68,127.73	1,130.00	960.50	100.63	96.29	150.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

including salary of matron.

ELEMENTARY SCHOOLS.

(FOR TOTAL AND NET COSTS, SEE SHEET NO. 1)

[illegible]¹ Including salary of matron.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGE

SHEET NO. 3.

SPECIAL SCHOOLS AND CLASSES.

**COST EXCLUSIVE OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES, AND WITH
INCOME NOT DEDUCTED.**

(For Total and Net Costs, see Sheet No. 1.)

COST OF DAY SCHOOLS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH INCOME NOT DEDUCTED.*—Continued.

HORACE MANN SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																				OPERATION OF PLANT.						PROMOTION OF HEALTH.					TRANSPORTATION.	Total.*	Average Membership.	Cost per Pupil, Average Membership.*	Average Attendance.	Cost per Pupil, Average Attendance.*	Number Pupils Hour.	Cost per Pupil Hour.*	SCHOOL.			
	Salary of Principal.	Salary of Clerks.	Postage.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies.	Kindergarten Supplies.	Music Supplies.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total for Instruction.	Number of Pupils Hour.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.	Nurses' Salaries.	Nurses' Supplies and Incidentals.									Total for Promotion of Health.	Traveling Expenses of Pupils.	
Horace Mann School	\$3,336.55		\$28.00	\$14.71	\$20,105.22	\$16.04	\$29.00	\$25.30	\$31.63	\$19.66	\$50.22	\$2.14	\$3.31	\$175.00	\$12.02		\$219.09		\$1.43	\$24,070.70	105,724	\$0.232	\$1,563.62	\$942.89	\$306.76	\$27.00	\$105.33	\$44.15	\$3,104.65	\$103.17		\$87.15	\$0.87	\$101.19	\$2,010.00	\$29,083.44*	137	\$218.80*	110	\$251.90*	103,724	\$0.280*	Horace Mann School.

*Including salary of Matron.

BOSTON CLERICAL SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																	OPERATION OF PLANT.					PROMOTION OF HEALTH.					Total.*	Average Membership.	Cost per Pupil, Average Membership.*	Average Attendance.	Cost per Pupil, Average Attendance.*	Number Pupil Hours.	Cost per Pupil Hour.*	SCHOOL.			
	Salary of Principal.	Salary Clerk.	Postage.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies.	Manual Training Supplies.	Commercial Supplies and Equipment.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitors' Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.									Nurses' Salaries.	Nurses' Supplies.	Total for Promotion of Health.
Boston Clerical School.....	\$908 30	\$107 56	\$35 04	\$7 60	\$12,350 11		\$300 00	\$33 45		\$0 37	\$1,462 83	\$32 37	\$462 72		\$2 28	\$15,758 77	152,014	\$0 103	\$719 05	\$441 19	\$70 94	\$0 11	\$0 05	\$14 37	\$1,255 61	\$65 31				\$65 31	\$17,079 60*	180	\$90 37*	169	\$109 60*	152,014	\$0 112*	Boston Clerical School.

BOSTON DISCIPLINARY DAY SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.											OPERATION OF PLANT.						PROMOTION OF HEALTH.					TRANSPORTATION.		Total.*	Average Membership.	Cost per Pupil, Average Membership.*	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupils.	Cost per Pupil Hour.*	SCHOOLS.
	Salaries of Teachers.	Postage.	Telephone.	Text Books.	Supplementary and Reference Books.	Drawing Supplies.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Janitors' Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.	Nurses' Salaries.	Nurses' Supplies.	Total for Promotion of Health.	Car Tickets.								
Boston Disciplinary Day School.....	\$1,201 21		\$27 78				\$11 07	\$4 50	\$6 80	\$1,351 53	10,015	\$0 127	\$432 46	\$207 07	\$6 08	\$10 46	\$5 09	\$071 05						\$108 05	\$2,191 03*	14	\$156 67*	0	\$243 65*	10,015	\$0 206*	Boston Disciplinary Day School.

TRADE SCHOOL FOR GIRLS.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																				OPERATION OF PLANT.						PROMOTION OF HEALTH.					Auditing Accounts.	Total.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOL.				
	Salary of Principal.	Salaries of Clerks.	Office Supplies.	Postage.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Books and Subscriptions.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies and Equipment.	Kindergarten Supplies.	Music Supplies.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Art, Farms, and Incidentals.	Advertising.	Total for Instruction.	Credit for Work Done for Other Units of the School System.	Net Total.	Number of Pupils.	Cost per Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.						Salaries, Medical Inspection.	Supplies, Medical Inspection.	Nurses' Salaries.	Nurses' Supplies.
Trade School for Girls.....	\$3,400.00	\$1,840.00	\$8.00	\$11.00	\$87.41	\$45,537.25		\$74.05	\$43.62	\$0.50	\$1,850.83	\$3,872.62	\$77.76		\$33.35		\$427.08	\$16.20	\$67,340.22		\$67,340.22	272,668	\$0.210	\$2,207.54	\$701.01	\$610.90	\$201.20	\$279.23	\$105.24	\$4,173.92	\$278.33	\$2.01	\$435.74	\$1.17	\$607.85	\$50.00	\$62,231.99*	272,668	\$0.228*	Trade School for Girls.

The above cost includes Day, Summer and Extension Classes.

BOSTON TRADE SCHOOL, DAY CLASSES.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

School.	EXPENSES OF INSTRUCTION.																			OPERATION OF PLANT.						PROMOTION OF HEALTH.					Auditing Accounts.	Total.*	Average Membership.	Cost per Pupil, Average Membership.*	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	School.	
	Salary of Principal.	Salaries of Clerks.	Office Supplies.	Postage.	Telephone.	Traveling Expenses of Principal.	Salaries of Teachers.	Salaries of Manual Education Teachers.	Books and Subscriptions.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Car fares and Incidentals.	Total for Instruction.	Credit for Work Done for Other Units of the School System.	Net Total.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.	Nurses' Salaries.	Nurses' Supplies.										Total for Promotion of Health.
Boston Trade School, Day Classes	\$4,043 50	\$1,512 57	\$47 11	\$38 50	\$122 37	\$27,398 66	\$10 29	\$310 79	\$120 23	\$3,967 46	\$1 62	\$340 00	\$217 24	\$38,160 33	\$240 10	\$7,920 16	173,304	\$0 218	\$5,129 04	\$3,323 47	\$130 21	\$60 81	\$164 75	\$5,504 28	\$70 85	\$0 91	\$71 70	\$50 00	\$46,552 20 *	100	\$239 01 *	173	\$270 63 *	173,304	\$0 270 *	Boston Trade School, Day Classes.

COMPULSORY CONTINUATION SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																				OPERATION OF PLANT.							PROMOTION OF HEALTH.					Auditing Accounts.	Total.*	Number of Pupils.	Cost per Pupil Hour.	SCHOOL.		
	Salary of Principal.	Salaries of Clerks.	Office Supplies.	Postage.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Books and Subscriptions.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Commercial Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies and Equipment.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total for Instruction.	Credit for Work Done for Other Units of the School System.	Net Total.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitors' Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.	Nurses' Salaries.						Nurses' Supplies.	Total for Promotion of Health.
Compulsory Continuation School.	\$3,525 00	\$3,619 05	\$24 34	\$405 50	\$304 68	\$60,000 00	.....	\$53 78	\$27 35	\$2,297 04	\$124 70	\$215 88	\$1,330 04	\$110 63	\$560 34	.....	\$40 40	\$73,921 29	\$20 10	\$73,001 19	552,092	\$0 131	\$3,039 25	\$1,818 70	\$667 73	\$300 10	\$24 81	\$96 10	\$6,046 00	.....	\$1 02	.....	\$0 18	\$1 29	\$50 00	\$79,969 20*	552,092	\$0 142*	Compulsory Continuation School.

Nine thousand eighty follow-up visits were made in 1918. These do not figure in the pupil hour cost.

VOLUNTARY CONTINUATION SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.																	OPERATION OF PLANT.					PROMOTION OF HEALTH.					Total.*	Number of Pupil Hours.	Cost per Pupil Hour. ¹	SCHOOL.			
	Salary of Principal.	Salaries of Clerks.	Postage.	Telephone.	Salaries of Teachers.	Salaries of Physical Education Teachers.	Text Books.	Supplementary Reference Books.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Incidentals.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salary of Janitor.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitors' Supplies.	Total for Operation of Plant.	Salaries, Medical Inspection.	Supplies, Medical Inspection.					Nurses' Salaries.	Nurses' Supplies.	Total for Promotion of Health.
Voluntary Continuation School.					\$300 00						\$75 87		\$3 09		\$3 75	\$442 71	2,014	\$0 219													\$442 71 *	2,014	\$0 219 *	Voluntary Continuation School.

DAY SCHOOL FOR IMMIGRANTS.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.										OPERATION OF PLANT.		Total.*	Number of Pupils Hours.	Cost per Pupil Hour.*	SCHOOL.
	Salaries of Teachers.	Text Books.	Supplementary and Reference Books.	Postage.	Printing.	Miscellaneous Educational Supplies.	Total for Instruction.	Number of Pupil Hours.	Cost per Hour of Instruction.	Incident Supplies.	Total for Operation of Plant.					
Day School for Immigrants.....	\$3,882 42	\$27 75		\$10 00	\$4 87	\$60 39	\$3,911 43	28,724	\$ 138			\$3,901 43 *	28,724	\$ 138 *	Day School for Immigrants.	

SPEECH IMPROVEMENT CLASSES.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

	EXPENSES OF INSTRUCTION.														OPERATION OF PLANT.						PROMOTION OF HEALTH.		Total.*	
	Salaries of Teachers.	Postage.	Telephone.	Text Books.	Supplementary and Reference Books.	Music Supplies.	Incidentals.	Sewing Supplies.	Printing.	Miscellaneous Educational Supplies.	Physical Education Supplies.	Total for Instruction.	Salaries of Janitors.	Fuel.	Electric Light.	Electric Power.	Gas.	Janitor's Supplies.	Total for Operation of Plant.	Supplies, Medical Inspection.	Total for Promotion of Health.			
Speech Improvement Classes.....	\$0,197 11	\$21 25	\$24 00	\$112 88	\$66 72	\$750 00	\$0 25	\$1 06	\$72 65	\$5 92	\$10,201 94	\$640 87	\$757 63	\$23 25	\$10 76	\$14 01	\$40 01	\$1,687 13	\$1 25	\$1 25	\$11,040 32 *	Speech Improvement Classes.	

FARM SERVICE.

	Expenses of Supervisors.	Postage.	Total.*	
Farm Service.....	\$48 70	\$1 00	\$49 70*	Farm Service.

SUMMER REVIEW HIGH SCHOOL.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.														OPERATION OF PLANT.					PROMOTION OF HEALTH.				
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NAME	AGE	SEX	OCCUPATION	RESIDENCE
J. H. BROWN	25	M	Farmer	Rural, Ill.
M. J. WHITE	30	F	Teacher	Chicago, Ill.

NAME	ADDRESS
J. H. BROWN	123 Main St., Chicago, Ill.
M. J. WHITE	456 Oak St., Chicago, Ill.

NAME	ADDRESS
J. H. BROWN	123 Main St., Chicago, Ill.
M. J. WHITE	456 Oak St., Chicago, Ill.

NAME	ADDRESS
J. H. BROWN	123 Main St., Chicago, Ill.
M. J. WHITE	456 Oak St., Chicago, Ill.
J. H. BROWN	123 Main St., Chicago, Ill.
M. J. WHITE	456 Oak St., Chicago, Ill.

SHEET NO. 4.

EVENING SCHOOLS.

COST EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH INCOME NOT DEDUCTED.

(For Total and Net Costs, see Sheet No. 1.)

1892

COST OF EVENING SCHOOLS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND INCOME NOT DEDUCTED.*

EVENING HIGH SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOLS.	EXPENSES OF INSTRUCTION.																	OPERATION OF PLANT.						Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOLS.	
	Salaries of Principals.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Laboratory Supplies and Equipment.	Musical Instruments and Supplies.	Printing.	Commercial Supplies and Equipment.	Miscellaneous Educational Supplies.	Incidentals.	Advertising.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.	Janitors' Supplies.								Total for Operation of Plant.
Brighton Commercial High.	\$45 00	\$80 00	\$17 25	\$1,040 00	\$27 00						\$14 10	\$20 41	\$37 73		\$1 80	\$1,237 29	0,190	\$6 140	\$144 29	\$247 30	\$20 25	\$45 00		\$450 88	\$1,744 24*	48	102	\$17 10*	9,190	\$0 190*	Brighton Commercial High.
Central High.	270 00	112 50	31 00	3,240 00	16 44				\$56 17		\$4 60	25 09	92 31		9 50	3,887 61	20,692	145	300 27	423 00	102 20	33 00		\$80 77	4,747 38*	45	297	16 98*	20,092	177*	Central High.
Charlston Commercial High.	270 00	60 00	22 85	1,668 00	6 30						35 07	32 83	63 13		8 72	2,197 43	16,736	131	231 18	247 50	67 50			\$40 13	2,743 50*	45	185	14 75*	16,735	163*	Charlston Commercial High.
Dorchester Commercial High.	264 00	107 50	40 60	3,498 00							43 16	\$4 24	\$4 86		12 00	4,168 26	37,012	110	333 93	337 50	90 00			\$76 43	4,860 68*	45	411	11 85*	37,012	131*	Dorchester Commercial High.
East Boston Commercial High.	270 00	90 00	13 32	1,268 00							34 25	38 85	34 86		1 58	1,788 58	14,058	123	188 47	292 50	45 00			\$40 17	2,174 73*	45	156	13 94*	14,058	154*	East Boston Commercial High.
Girls Commercial High.	270 00	110 50		1,934 00	6 60						34 25	36 50	\$2 81		8 80	2,503 06	25,702	997	264 48	247 50	67 50	27 00		\$60 88	2,106 92*	45	248	10 50*	25,702	120*	Girls Commercial High.
Hyde Park Commercial High.	45 00			600 00							14 04	2 04	3 04		7 00	732 02	8,818	125	81 43	123 75	24 30			\$29 48	901 50*	45	65	14 70*	8,818	165*	Hyde Park Commercial High.
North Commercial High.	141 00	30 00	3 67	\$72 00											5 00	784 93	4,132	182	64 47	48 00	24 00	12 00		\$142 07	903 00*	24	88	10 50*	4,132	216*	North Commercial High.
Rosbury Commercial High.	270 00	112 50	34 63	3,732 00	32 00					\$7 00	70 12	152 88	192 29	\$0 14	10 00	4,814 35	35,282	130	341 19	220 50	64 50			\$86 10	5,270 54*	45	392	13 45*	35,282	149*	Rosbury Commercial High.
South Boston Commercial High.	270 00	65 00	25 25	2,110 00							68 60	27 66	39 77		9 50	2,621 58	24,212	108	264 67	247 50	67 50			\$70 67	3,201 25*	45	309	11 00*	24,212	132*	South Boston Commercial High.
Totals.	\$2,118 00	\$508 00	\$104 39	\$19,768 00	\$58 74				\$56 17	\$7 00	\$348 08	\$422 00	\$568 96	\$0 14	\$68 10	\$24,445 08	198,534	\$0 122	\$2,214 72	\$2,345 25	\$603 75	\$117 00		\$5,280 72	\$20,723 50*	2,220	\$13 21*	198,534	\$0 140*	Totals.	

EVENING ELEMENTARY SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOLS.	EXPENSES OF INSTRUCTION.																OPERATION OF PLANT.											SCHOOLS.				
	Salaries of Principals.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies and Equipment.	Musical Instruments and Supplies.	Printing.	Miscellaneous Educational Supplies.	Incidentals.	Advertising.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.	Janitors' Supplies.	Total for Operation of Plant.	Total.*	Number of Sessions.	Average Attendance.		Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	
Abraham Lincoln.	\$240 00	\$20 00	\$6 00	\$671 00									19 81	\$80 12		\$990 94	9,003	\$0 110	\$291 18	\$330 00	\$36 00			\$627 38	\$1,624 22*	60	76	\$21 66*	9,003	\$0 180*	Abraham Lincoln.	
Barnes.	240 00	72 50	9 89	1,190 50						\$6 12			54 73			1,849 73	17,828	108	291 54	304 00	91 00	\$52 00		\$728 54	2,278 37*	60	106	15 61*	17,828	129*	Barnes.	
Bowdoin.	128 00		2 30	374 00							\$0 12					\$64 42	4,874	103	145 19	176 00	36 00			\$359 09	854 51*	32	76	11 24*	4,874	175*	Bowdoin.	
Croton.	240 00		5 81	624 00					22 78	4 25			16 90			912 91	7,926	116	172 35	135 00	78 00			\$382 35	1,268 28*	60	68	19 63*	7,926	163*	Croton.	
Dorchester.	240 00	74 00		855 00					18 90				17 24			1,165 74	12,748	103	196 19	320 00	45 00			\$271 06	1,758 83*	60	109	16 57*	12,748	187*	Dorchester.	
East.	240 00		3 00	728 00									18 28			969 23	8,698	113	207 59	302 00	54 00			\$333 50	1,642 82*	60	73	22 82*	8,698	185*	East.	
Franklin.	284 00	72 00	10 85	1,203 50									52			1,714 45	16,002	107	245 32	210 00	90 00			\$118 28	2,229 77*	71	113	19 73*	16,002	139*	Franklin.	
Harvard.	240 00	73 00	11 10	2,190 50									66 57			2,629 52	27,112	106	264 34	330 00	116 50			\$820 34	2,450 16*	60	218	15 27*	27,112	127*	Harvard.	
Hyde Park.	160 00			358 00											5 00	\$23 00	4,594	113	79 11	91 00	18 00			\$169 01	682 01*	40	57	11 67*	4,594	144*	Hyde Park.	
Phillips Brooks.	240 00		6 00	449 50					5 71	1 80			130			763 01	5,400	130	112 14	165 00	30 00			\$308 44	1,011 45*	60	15	22 48*	5,400	187*	Phillips Brooks.	
Theodore Lyman.	240 00	66 00	12 08	1,465 00							7 65		34	34 96		2 05	1,767 97	10,996	105	519 93	646 00	91 00	62 10		\$1,319 21	3,058 18*	60	159	22 20*	10,996	184*	Theodore Lyman.
Warren.	240 00	40 00	12 51	816 00							11 27		1 50	69 74		8 50	1,189 52	12,334	108	212 59	312 50	58 75			\$583 84	1,782 36*	60	197	10 66*	12,334	135*	Warren.
Washington.	128 00			184 00							20 31					\$41 31	3,303	103	171 67	32 00	11 32			\$115 09	656 40*	32	52	8 78*	3,303	137*	Washington.	
Wells.	240 00	74 00	12 20	1,079 00							2 68		1 08	53 11		8 00	1,469 07	14,020	104	205 18	124 00	65 04	66 00		\$320 82	1,699 89*	60	117	17 00*	14,020	142*	Wells.
Wendell Phillips.	36 00		1 00	144 00												\$181 90	1,204	130	25 29	64 00	16 00			\$108 30	290 29*	32	22	13 20*	1,204	206*	Wendell Phillips.	
	112 00	42 00	5 57	337 50									35	6 68		3 50	\$65 50	5,158	108	82 48	184 00	14 00	21 00		\$271 91	777 54*	28	92	8 45*	5,158	150*	
Totals.	\$3,232 00	\$518 50	\$98 91	\$12,675 00				\$145 26	\$16 45		\$4 60	\$241 20	\$32 30	\$17,174 22	\$67 00	\$0 102	\$3,351 47	\$3,094 50	\$795 71	\$201 78				\$8,043 04	\$25,218 16*	1,811	\$16 60*	167,309	\$0 150*	Totals.		

BOSTON TRADE SCHOOL, EVENING CLASSES.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOLS.	EXPENSES OF INSTRUCTION.														OPERATION OF PLANT.						Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOLS.
	Salary of Principal.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Car Fares.	Telephone.	Manual Training Supplies and Equipment.	Models.	Printing.	Office Supplies.	Incidentals.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.	Janitors' Supplies.	Total for Operation of Plant.							
Boston Trade School, Evening Classes.	\$72 50	\$177 24	\$22 45	\$2,756 25	\$5 91	\$1 65	\$1,505 73	\$6 00	\$51 93	\$1 00	\$0 55	\$4,734 21	17,440	\$0 271	\$660 80	\$650 50	\$13 77	\$33 85		\$1,620 98	\$8,333 10*	133	270	\$23 54*	17,440	\$0 361*	Boston Trade School, Evening Classes.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

COST OF EVENING SCHOOL

Name of School	Salaries of Teachers		Salaries of Clerks		Total
	Per Month	Per Year	Per Month	Per Year	
Central High	941.00	112.50	217.25	2606.00	3000.00
Charleston Commercial High	270.00	32.25	48.00	580.00	640.00
East Boston Commercial	270.00	32.25	48.00	580.00	640.00
Girls' Commercial	270.00	32.25	48.00	580.00	640.00
Hyde Park Commercial	270.00	32.25	48.00	580.00	640.00
North	270.00	32.25	48.00	580.00	640.00
South	270.00	32.25	48.00	580.00	640.00
Total	2500.00	300.00	217.25	2606.00	3000.00

SHEET NO. 5.

**SCHOOL CENTERS.—USE OF SCHOOL
ACCOMMODATIONS.**

**COST EXCLUSIVE OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES.**

(For Total and Net Costs, see Sheet No. 1.)

COST OF EVENING SERVICE

Station of Locomotive	Per Cent	Per Cent	Per Cent
North Boston Commercial High	270 00	112 50	200 00
Charles	270 00	90 00	270 00
East Boston Commercial	270 00	107 50	200 00
East Boston Commercial	270 00	90 00	270 00
East Boston Commercial	270 00	110 50	200 00
Hyde Park Commercial High	270 00	114 00	200 00
North Boston Commercial High	270 00	113 50	200 00
South Boston Commercial High	270 00	113 50	200 00
Total	270 00	113 50	200 00

Station of Locomotive	Per Cent	Per Cent	Per Cent
North Boston Commercial High	270 00	112 50	200 00
Charles	270 00	90 00	270 00
East Boston Commercial	270 00	107 50	200 00
East Boston Commercial	270 00	90 00	270 00
East Boston Commercial	270 00	110 50	200 00
Hyde Park Commercial High	270 00	114 00	200 00
North Boston Commercial High	270 00	113 50	200 00
South Boston Commercial High	270 00	113 50	200 00
Total	270 00	113 50	200 00

SHEET NO. 5.

COST OF ACTIVITIES, EXTENDED USE OF PUBLIC SCHOOLS, EXCLUSIVE OF ADMINISTRATION,
SUPERVISION AND GENERAL CHARGES.*

SCHOOL CENTERS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

	Salaries of Managers, Leaders, etc.	Services of Community Motion Picture Bureau.	Moving Picture Machine Accessories and Incidentals.	Stereopticon Accessories and Repairs.	Musical Instruments, Music Supplies and Repairs.	Demonstra- tions, etc.	Printing and Adver- tising.	Postage.	Telephone.	Incidentals.	Salaries of Janitors.	Fuel.	Light.	Total.*	Number of Sessions.	Average Attend- ance.	Per Capita Cost, Average Attend- ance.*	Number of Pupil Hours.	Per Capita Cost Per Hour.*	
Charlestown School Center.....	\$1,703 07	\$257 50				\$31 30	\$31 30				\$253 40	\$330 00	\$264 50	\$2,877 67*	50	262	\$10 98*	36,025	\$0 079*	Charlestown School Center.
Dorchester School Center.....	1,969 00	193 40		\$6 00	\$10 00	18 10	46 18	\$8 00			264 01	309 12	235 52	3,059 93*	46	873	3 51*	42,316	072*	Dorchester School Center.
East Boston School Center.....	1,433 50	196 40				8 15	11 28				276 00	268 80	193 20	2,387 33*	60	281	8 50*	33,720	070*	East Boston School Center.
North End School Center.....	851 00										144 55	78 00	41 72	1,115 27*	33	47	23 73*	3,102	359*	North End School Center.
Roxbury School Center.....	2,970 00	190 40		3 10	10 00	11 27	89 77	8 00	\$20 94		652 88	712 32	558 62	5,227 30*	106	477	10 96*	50,562	103*	Roxbury School Center.
Sherwin School Center.....	55 00					12 00					19 50	17 92	14 16	118 58*	8	288	41*	3,648	032*	Sherwin School Center.
South Boston School Center.....	1,035 25	241 00				8 00	15 48				184 21	288 96	124 70	1,897 60*	43	317	5 99*	27,262	069*	South Boston School Center.
Washington School Center.....	85 00					24 00				\$2 50	61 06	134 40	33 60	340 56*	30	146	2 33*	38,544	008*	Washington School Center.
West End School Center.....	1,104 00	3 00				24 00	79 46			15 70	263 51	179 20	89 24	1,758 11*	34	438	4 01*	29,784	059*	West End School Center.
Totals.....	\$11,206 42	\$1,081 70		\$9 10	\$20 00	\$136 82	\$273 47	\$16 00	\$20 94	\$18 20	\$2,119 72	\$2,324 72	\$1,555 26	\$18,782 35*	.....	3,129	\$6 00*	264,963	\$0 070*	Totals.

USE OF SCHOOL ACCOMMODATIONS FOR MUNICIPAL CONCERTS, PARENTS' AND TEACHERS'
MEETINGS, ALUMNI MEETINGS, ETC.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

	Payment for Services.	Salaries of Janitors.	Fuel.	Light.	Printing.	Demonstra- tions, etc.	Total.*	Total Attend- ance.	Per Capita Cost.*	
Use of School Accommodations.....	\$805 50	\$920 98	\$351 68	\$172 70	\$9 51	\$12 00	\$2,272 37*	46,354	\$0 049*	Use of School Accommodations.

*EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

COST OF ACTIVITIES EXTENDED

Description of Activity	Amount	
	Actual	Estimated
Washington	1,104 00	1,104 00
Central	88 00	88 00
Shelton	1,085 32	1,085 32
Shelton	88 00	88 00
North	2,070 00	2,070 00
North	881 00	881 00
North	188 50	188 50
North	193 10	193 10
North	50	50
Total	\$41,208 42	\$41,208 42

	SHEET NO. 6.	
PARK PLAYGROUNDS.—SCHOOLYARD		
PLAYGROUNDS.		
COST EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.		
(For Total and Net Costs, see Sheet No. 1.)		

	SHEET NO. 6.	
	PARK PLAYGROUNDS.—SCHOOLYARD	
	PLAYGROUNDS.	
	COST EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.	
	(For Total and Net Costs, see Sheet No. 1.)	

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	SHEET NO. 6.	
	PARK PLAYGROUNDS.—SCHOOLYARD	
	PLAYGROUNDS.	
	COST EXCLUSIVE OF ADMINISTRATION, SUP-	
	VISION AND GENERAL CHARGES.	
	(For Total and Net Costs, see Sheet No. 1.)	

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COST OF PLAYGROUNDS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.*

PARK PLAYGROUNDS.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

	Play Teachers' Salaries.	Janitors' Salaries.	Apparatus.	Labor and Teaming on Apparatus, etc.	Supplies for Athletics and Games.	Supplies for Quiet Play.	Printing and Incidentals.	Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil.*	Cost per Pupil per Session.*	
Ashmont.....	\$139 18		\$14 76	\$16 23	\$18 81	\$0 31	\$1 89	\$191 18 *	56	99	\$1 93 *	\$0 034 *	Ashmont.
Billings Field.....	122 68		14 76	16 23	10 84	31	1 89	166 71 *	62	46	3 62 *	058 *	Billings Field.
Boston Common.....	116 68		14 76	16 23	11 17	31	1 89	161 04 *	57	56	2 88 *	050 *	Boston Common.
Carolina Avenue.....	427 00	\$3 00	14 76	16 23	20 61	4 78	1 89	494 87 *	217	199	2 49 *	011 *	Carolina Avenue.
Charlesbank.....	794 54		20 52	32 45	88 39	30 07	5 71	980 68 *	381	302	3 25 *	008 *	Charlesbank.
Charlestown.....	150 23		14 76	16 23	30 57	31	1 90	214 00 *	49	119	1 80 *	036 *	Charlestown.
Charlestown Heights.....	438 85		14 76	16 22	58 31	23 72	1 90	553 76 *	235	119	4 65 *	019 *	Charlestown Heights.
Christopher Gibson.....	491 50	20 00	14 76	16 22	39 70	8 15	3 55	593 88 *	226	275	2 16 *	009 *	Christopher Gibson.
Columbus Avenue.....	440 50		17 56	16 22	56 40	2 32	1 90	534 99 *	194	125	4 28 *	022 *	Columbus Avenue.
Commonwealth.....	109 72		14 76	16 22	9 51	11 27	1 90	163 38 *	35	89	1 84 *	052 *	Commonwealth.
Cottage Street.....	621 44		14 76	16 22	87 01	9 36	2 44	751 23 *	243	203	3 70 *	015 *	Cottage Street.
Dorchester Park.....	87 82		14 76	16 22	5 99	31	1 90	127 00 *	40	26	4 88 *	122 *	Dorchester Park.
Fellows Street.....	410 09		14 76	62 22	36 39	14 89	1 90	547 35 *	239	134	4 08 *	017 *	Fellows Street.
Fenway.....	176 67		14 75	16 22	18 29	31	1 90	228 14 *	57	73	3 13 *	054 *	Fenway.
First Street.....	394 89		14 75	16 22	34 77	4 22	1 90	466 75 *	168	131	3 56 *	021 *	First Street.
Florence Street.....	104 88		14 75	16 22	26 36	30	1 90	164 41 *	39	114	1 44 *	036 *	Florence Street.
Forest Hills.....	353 39		14 75	16 22	56 62	12 06	1 90	454 94 *	194	97	4 69 *	024 *	Forest Hills.
Franklin Field.....	504 45		14 75	16 22	117 00	2 33	11 44	666 19 *	181	238	2 80 *	015 *	Franklin Field.
Franklin Park.....	302 68		18 11	16 22	61 34	30	1 90	400 55 *	60	173	2 32 *	038 *	Franklin Park.
Franklin Square.....	222 47	18 00	18 38	16 22	7 70	6 71	1 90	291 38 *	151	109	2 67 *	017 *	Franklin Square.
Glendon Lot.....	34 58		14 75	16 22	36	30	1 90	68 11 *	16	73	93 *	058 *	Glendon Lot.
Henry Grew Field.....	65 68		14 75	16 22	20 79	30	1 90	119 64 *	22	78	1 53 *	069 *	Henry Grew Field.
Jefferson Lot.....	51 08		14 75	16 22	36	30	1 90	84 61 *	27	37	2 29 *	084 *	Jefferson Lot.
John Winthrop.....	462 95		14 75	16 22	82 67	8 71	1 94	587 24 *	243	200	2 94 *	012 *	John Winthrop.
Marcella Street.....	561 26		14 75	16 22	108 20	17 56	5 08	723 05 *	233	274	2 64 *	011 *	Marcella Street.
Metropolitan.....	103 10		14 75	16 22	10 74	30	1 90	147 10 *	49	29	5 07 *	103 *	Metropolitan.
Mission Hill.....	466 61		14 75	16 22	57 53	3 80	1 90	560 81 *	239	263	1 98 *	008 *	Mission Hill.
Neponset.....	228 32		14 75	16 22	53 41	3 46	1 90	318 06 *	127	89	3 57 *	028 *	Neponset.
Norfolk Street.....	104 69		14 75	16 22	7 38	30	1 90	145 24 *	50	48	3 03 *	060 *	Norfolk Street.
North Brighton.....	365 11	6 21	14 75	16 22	65 33	2 83	1 90	472 35 *	179	108	4 37 *	024 *	North Brighton.
North End Park.....	121 19		14 75	16 22	15 51	30	1 90	169 87 *	57	109	1 56 *	027 *	North End Park.
Orchard Park Corner.....	293 21	97 50	16 13	62 22	22 68	5 71	1 90	499 35 *	159	128	3 90 *	024 *	Orchard Park Corner.
Orient Heights.....	115 19		14 75	16 22	22 49	30	1 90	170 85 *	57	84	2 03 *	035 *	Orient Heights.
Parkinson.....	106 19		14 75	16 22	10 74	30	1 90	150 10 *	51	37	4 06 *	079 *	Parkinson.
Prince Street.....	492 41	2 00	14 75	40 22	37 91	10 72	1 90	599 91 *	175	375	1 80 *	009 *	Prince Street.
Randolph Street.....	552 31		14 75	16 22	139 93	13 28	1 90	738 39 *	236	242	3 05 *	012 *	Randolph Street.
Reservoir.....	74 69		14 75	16 22	2 06	30	1 90	109 92 *	30	31	3 55 *	118 *	Reservoir.
Rogers Park.....	250 87		14 75	16 22	62 65	7 46	2 54	353 89 *	128	109	3 25 *	025 *	Rogers Park.
Ronan Park.....	489 05	27 78	14 75	16 22	92 60	9 30	2 75	651 94 *	239	222	3 94 *	012 *	Ronan Park.
Roslindale.....	382 75	22 36	14 75	16 22	39 76	5 09	1 94	482 87 *	183	86	5 61 *	030 *	Roslindale.
Rutherford Avenue.....	457 50	17 94	14 75	16 22	43 69	9 34	2 48	562 42 *	235	166	3 39 *	014 *	Rutherford Avenue.
Savin Hill.....	16 49		14 75	16 22	17 07	30	1 90	66 73 *	2	25	2 67 *	1.335 *	Savin Hill.
Sidney Marsh.....	35 89		14 75	16 22	36	30	1 90	69 42 *	22	44	1 58 *	071 *	Sidney Marsh.
Strandway.....	597 50	24 00	14 75	40 22	51 44	8 41	1 90	739 22 *	219	196	3 77 *	017 *	Strandway.
Tyler Street.....	444 15	51 00	14 75	40 22	29 10	12 90	7 47	599 59 *	235	151	3 97 *	016 *	Tyler Street.
Volkman Field.....	109 17		14 75	16 22	13 79	30	1 90	156 13 *	56	79	1 98 *	035 *	Volkman Field.
Washington Park.....	355 95	97 49	14 75	16 22	27 26	7 86	4 11	523 64 *	196	226	2 32 *	011 *	Washington Park.
West Fifth Street.....	428 90		14 75	16 22	10 53	18 11	1 90	490 41 *	246	156	3 14 *	012 *	West Fifth Street.
West Third Street.....	353 79	22 36	14 75	16 22	28 73	15 71	1 90	453 46 *	239	132	3 44 *	014 *	West Third Street.
William Eustis Park.....	523 79	28 28	14 75	16 22	66 92	11 99	0 14	667 99 *	218	176	3 80 *	017 *	William Eustis Park.
Wood Island.....	470 54		14 75	16 22	77 61	2 73	1 94	583 79 *	172	112	5 21 *	030 *	Wood Island.
Totals.....	\$15,531 86	\$437 92	\$778 31	\$1,007 50	\$2,020 86	\$312 31	\$129 77	\$20,218 53 *	.....	6,832	\$2 96 *	\$0.016 *	Totals.

*EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

SCHOOLYARD PLAYGROUNDS.*
[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

	Teachers' Salaries.	Janitors' Salaries.	Apparatus.	Labor and Teaming on Apparatus, etc.	Supplies for Athletics and Games.	Supplies for Quiet Play.	Printing and Incidentals.	Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil.*	Cost per Pupil per Session.*	
Blackinton.....	\$141 46	\$83 73	\$14 75	\$16 22	\$18 91	\$5 40	\$1 90	\$282 37 *	82	82	\$3 44 *	\$0 041 *	Blackinton.
Choate Burnham.....	253 08	146 00	16 60	16 22	0 40	8 39	1 90	448 59 *	146	163	2 75 *	018 *	Choate Burnham.
Christopher Gibson.....	264 44	146 15	14 75	16 22	15 53	6 45	1 90	465 44 *	147	81	5 75 *	039 *	Christopher Gibson.
Comins.....	221 90	126 78	14 75	16 22	20 89	15 52	3 70	419 76 *	126	112	3 75 *	029 *	Comins.
Cyrus Alger.....	261 55	122 00	14 75	16 22	9 59	6 46	1 90	432 47 *	124	128	3 38 *	027 *	Cyrus Alger.
Damon.....	172 91	88 00	14 75	16 22	6 66	11 70	3 83	314 07 *	91	89	3 53 *	038 *	Damon.
Dudley.....	176 16	94 78	14 75	16 22	10 53	11 52	2 88	326 84 *	91	137	2 39 *	026 *	Dudley.
Edmund P. Tileston.....	218 40	120 78	15 10	16 22	10 31	12 64	2 11	395 56 *	124	89	4 44 *	035 *	Edmund P. Tileston.
Elihu Greenwood.....	159 66	84 00	14 75	16 22	9 59	13 46	1 90	299 58 *	93	82	3 65 *	039 *	Elihu Greenwood.
Ellis Mendell.....	242 39	137 00	17 75	16 22	9 34	4 34	0 90	436 94 *	140	73	5 99 *	042 *	Ellis Mendell.
Emerson.....	357 23	195 78	14 75	16 22	22 61	13 83	0 29	622 71 *	182	155	4 02 *	022 *	Emerson.
Fairmount.....	188 12	110 42	14 75	16 22	17 68	14 09	3 93	365 21 *	112	55	6 64 *	059 *	Fairmount.
Farragut.....	220 05	121 00	14 75	16 22	32 94	6 21	1 90	413 07 *	123	87	4 75 *	038 *	Farragut.
Francis Parkman.....	220 65	121 99	14 75	16 22	22 00	15 52	1 90	413 03 *	125	84	4 92 *	039 *	Francis Parkman.
Frothingham.....	258 09	152 78	19 20	16 22	14 27	14 46	1 90	476 92 *	153	154	3 10 *	020 *	Frothingham.
Hancock.....	231 30	118 89	14 75	16 22	28 32	8 95	1 90	420 33 *	113	101	4 16 *	036 *	Hancock.
Henry Grew.....	233 22	117 42	14 75	16 22	18 16	12 08	1 90	413 75 *	124	74	5 59 *	045 *	Henry Grew.
John Cheverus.....	235 44	134 78	16 65	22 92	17 77	13 46	7 10	448 12 *	135	97	4 62 *	034 *	John Cheverus.
John D. Philbrick.....	270 90	172 78	15 00	16 22	14 19	12 08	1 94	603 11 *	168	91	5 53 *	032 *	John D. Philbrick.
John J. Williams.....	286 59	138 00	16 65	16 22	22 25	8 15	1 90	489 76 *	152	172	2 85 *	018 *	John J. Williams.
Lafayette.....	330 52	182 00	14 75	16 22	24 08	20 38	1 94	589 89 *	182	135	4 37 *	024 *	Lafayette.
Lucretia Crooker.....	366 67	184 00	15 75	16 22	28 65	16 83	1 90	630 02 *	189	171	3 68 *	019 *	Lucretia Crooker.
Nathan Hale.....	164 76	94 00	14 75	17 72	20 53	5 63	1 90	319 29 *	94	150	2 13 *	022 *	Nathan Hale.
Phillips Brooks.....	372 72	194 78	14 75	16 22	44 90	17 23	3 93	664 53 *	192	178	3 73 *	019 *	Phillips Brooks.
Plummer.....	238 55	130 00	17 21	18 47	19 08	1 00	1 90	426 21 *	130	121	3 52 *	027 *	Plummer.
Prescott.....	282 30	132 57	19 75	16 22	7 86	4 46	4 32	467 48 *	133	83	5 63 *	042 *	Prescott.
Robert Swan.....	283 28	144 00	20 75	16 22	29 09	15 43	3 78	512 55 *	144	116	4 42 *	030 *	Robert Swan.
School Street.....	198 86	117 00	14 75	16 22	24 13	24 22	5 90	401 08 *	119	77	5 21 *	043 *	School Street.
Stoughton.....	181 71	99 00	14 75	16 22	14 71	3 62	1 90	331 91 *	99	54	6 15 *	062 *	Stoughton.
Theodore Lyman.....	286 58	148 57	20 99	16 22	7 99	16 96	2 11	499 42 *	145	133	3 76 *	025 *	Theodore Lyman.
Trescott.....	138 15	69 00	14 75	16 22	2 47	13 25	1 90	255 74 *	69	87	2 94 *	042 *	Trescott.
Wendell Phillips.....	303 51	162 78	16 00	17 12	13 32	16 21	1 90	530 84 *	160	220	2 41 *	015 *	Wendell Phillips.
William Blackstone.....	360 51	181 36	151 48	72 62	33 62	6 90	1 90	808 39 *	178	217	3 73 *	020 *	William Blackstone.
William Eustis.....	167 70	92 00	14 75	16 22	15 69	5 12	1 90	313 38 *	92	133	2 36 *	025 *	William Eustis.
William Wirt Warren.....	273 83	143 00	16 05	16 22	8 10	17 46	3 15	477 81 *	145	87	5 49 *	037 *	William Wirt Warren.
Totals.....	\$8,563 19	\$4,607 12	\$689 93	\$635 45	\$622 16	\$399 41	\$98 91	\$15,616 17 *	.....	4,068	\$3 84 *	\$0 027 *	Totals.

SCHOOL DOCUMENT NO. 2 — 1919 BOSTON PUBLIC SCHOOLS

SUPPLEMENTARY REPORT

ORGANIZATION AND ADMINISTRATION OF INTERMEDIATE SCHOOLS IN BOSTON

PUBLISHED BY THE BOARD OF SUPERINTENDENTS AS A
SUPPLEMENT TO BULLETIN XVII, SCHOOL DOCUMENT
NO. 13, 1918, WHICH DEALS WITH THE SAME SUBJECT



JANUARY, 1919

CITY OF BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, BOSTON, January 29, 1919.

Ordered, That three thousand (3,000) copies of a Supplementary Report on "Organization and Administration of Intermediate Schools in Boston," approved by the Board of Superintendents at its meeting on January 24, 1919, be printed as a school document.

Attest:

THORNTON D. APOLLONIO,
Secretary.

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INTRODUCTION.

Since September, 1915, pupils have been admitted to the high schools of the city with 5 points of credit toward a high school diploma for work satisfactorily completed in a modern foreign language in elementary schools. This was the culmination of the first step taken in Boston in the reorganization of the upper grades of the elementary school. Gradually, other subjects of study have been modified in content and methods of instruction until, in September, 1917, the ninth-grade pupils were retained in ten elementary districts, thereby completing a junior high school organization, toward which many of our elementary schools have been working for some years. For the first time, in June, 1918, the intermediate schools had covered the work of the first year of the high school and sent pupils into the second year of the four-year high school course.

The Board of Superintendents made such administrative arrangements as seemed necessary or desirable to provide for the discharge of pupils from the ninth-grade intermediate schools and their admission to the high schools. Such legislation as had been passed by the Board of Superintendents and such executive orders as had been issued by the Superintendent of Schools to September 1, 1918, are contained in Section IV of School Document No. 13, 1918.

Since it could scarcely be expected that every administrative detail could be anticipated, after the first experience in June and September, 1918, some modifications and extensions were obviously desirable. As is customary in Boston under such circumstances, on September 21, 1918, Superintendent Thompson appointed a conference committee to consider and report on any of the present administrative arrangements that appeared to the committee to need modification and also on the

need of any additional legislation in connection with the administrative problems common to intermediate and high schools.

The conference committee appointed by the superintendent consists of the following principals:

Gertrude E. Bigelow	.	.	Hancock School,
James H. Leary	.	.	Emerson School,
W. Lawrence Murphy	.	.	Mary Hemenway School,
Representing intermediate schools.			

Oscar C. Gallagher	.	.	West Roxbury High School,
Myron W. Richardson	.	.	Girls' High School,
James E. Thomas	.	.	Dorchester High School,
Representing high schools.			

Superintendent Thompson and Assistant Superintendents Ballou and Burke, who are the members of the Board of Superintendents assigned to problems of the intermediate and high school, respectively, met regularly with the committee. Miss Bigelow acted as secretary.

The committee held its first meeting September 25, 1918. From that time to December 10 the committee held ten meetings, usually meeting each week on Tuesday at 2.30 p. m. The interest in and professional devotion to the work before the committee is attested to by the fact that the committee met regularly during the time the schools were closed on account of the influenza, and also by the fact that, with the exception of the absence of one member at one meeting, every member of the committee has been present at every meeting.

The report which is presented herewith represents the results of the deliberations of the committee to date. The meetings of the committee are to be resumed soon and subsequent reports on other matters may be expected.

SUPPLEMENTARY REPORT ON ORGANIZATION AND ADMINISTRATION OF INTERMEDIATE SCHOOLS IN BOSTON.

THREE COURSES OF STUDY OFFERED.

The intermediate school offers a three-year course, which is followed by a three-year course in the high school. The last year of the intermediate school course corresponds with the first year of the present four-year high school course.

In addition to the usual latitude allowed pupils in the selection of studies to be pursued in the first year of the high school, the intermediate school provides for pupils a limited differentiation of work in Grades VII and VIII according to their probable future educational careers. Pupils intending to pursue an academic or college preparatory course may begin a modern foreign language in Grade VII. Pupils intending to take a commercial course in the high school or to leave school at an early date may begin elementary work in clerical practice at the beginning of Grade VII.

Wherever the number of pupils warrants it, and as fast as accommodations can be provided, industrial and prevocational work is also provided for pupils who need manual activity as a stimulus to prolong their school attendance through a coöperative industrial high school course, a trade school, the High School of Practical Arts, or the Mechanic Arts High School. Such industrial and prevocational work is also adapted to the needs of pupils who may leave school before completing a high school course. (See pages 12, 13, 15, 16, 17, and 62, School Document No. 13, 1918.)

SIGNIFICANCE OF PROPOSED MODIFICATIONS.

Furthermore, the usual subjects of Grades VII and VIII, such as English, mathematics, history and geog-

raphy, are undergoing modification in content and in methods of instruction with a view of giving pupils better education whatever their future in school may be. The significant feature of this educational reorganization lies in the fact that secondary education is begun earlier and the pupil has, therefore, an opportunity to acquire more high school education than under the old system of organization. (For courses of study already in print, see page 36, School Document No. 13, 1918.)

ADMINISTRATIVE REGULATIONS.

The combined intermediate and high school courses will be operated under the following administrative conditions:

1. 100 diploma points are required for satisfactory completion of the course.

2. 20 diploma points should ordinarily be earned in Grades VII and VIII combined, and 20 points in each of the four succeeding years.

3. The principle of rapid advancement is provided for as follows:

- (a) In addition to the prescribed work for Grades VII and VIII, for which 20 diploma points are allowed, especially qualified pupils who at the end of Grade VI meet the scholarship standards hereafter to be established by the Board of Superintendents may elect a modern foreign language for the successful study of which 5 additional diploma points may be earned at the end of the eighth grade. The number of pupils qualified to elect the subjects will probably not exceed 50 per cent of the pupils in Grade VII.

- (b) Of the pupils who earn 25 diploma points in Grades VII-VIII, those who have shown superior ability as measured by the scholarship standards hereafter to be established by the Board of Superintendents will be given opportunity to carry a

program in Grade IX aggregating 25 diploma points. All such pupils who earn 25 diploma points in Grade IX shall be permitted to carry a 25-point program in Grade X. All such pupils who earn 25 diploma points in Grade X shall be permitted to carry a 25-point program in Grade XI, thereby completing in five years the total of 100 points for the combined six-year course of study for intermediate and high schools.

4. Pupils who earn 25 points in Grades VII-VIII but who fail to earn 25 points in Grade IX of an intermediate school shall be required to carry at least a 20-point program in each of the remaining three years of the high school course. (See page 69 for portion of School Document No. 13, 1918, which the above regulations supplement or modify.)

TIME ALLOTMENTS AND DIPLOMA POINTS FOR SUBJECTS IN GRADES VII-VIII INTERMEDIATE SCHOOLS.

The courses of study for Grades VII and VIII in the intermediate school are based in large part on the corresponding courses of study for the regular elementary school. The time allotments of all studies in Grades VII and VIII are given on pages 67 and 68 of School Document No. 13, 1918, and since no change has been made in them they are not reprinted here.

Since it has been agreed that the intermediate school should introduce promotion by subject and also a point system for diploma credit similar to that of the high school, it was obviously desirable to work out on some mathematical basis the diploma points which shall be allowed each subject. In the high school one diploma point is allowed for 40 minutes of recitation for which pupils are expected to make an equivalent amount of preparation outside of class. A subject in the high school for which pupils do not make preparation is allowed only half as much credit.

Accordingly, the subjects which may be considered as constituting the regular intermediate school course have been classified under two headings: Subjects which require no preparation on the part of pupils and subjects which require varying amounts of preparation. The outline of such a division of the subjects and some other information regarding time allotments in intermediate schools follow:

Intermediate School Course with Mathematics.

	VII.	VIII.	Totals.	*Diploma Points.	Prepared Lessons.	Unprepared Lessons.
Unprepared subjects (1 diploma point based on 120 minutes).						
Either one† { Drawing.....	60	60	120	1	None	All
Science.....	60	60	120	1	None	All
Manual training, domestic science.....	90	90	180	1	None	All
Music.....	60	60	120	1	None	All
Physical training.....	75	75	150	1	None	All
Penmanship.....	60	30	90	1	None	All
Hygiene.....	60	60	120	1	None	All
Prepared subjects (1 diploma point based on 80 minutes).						
English.....	300	300	600	5	8	12
Composition, oral and written; reading and literature; spelling.						
Mathematics.....	180	180	360	4	8	4
Geography.....	150	150	300	3	4	6
History.....	120	120	240	2	4	4
Study time.....	150	150	300			
Recesses.....	100	100	200			
Opening exercises.....	25	25	50			
Optional time.....	70	100	170			
Totals.....	1,500	1,500	3,000	*20	24	26

* Qualified pupils may take a modern foreign language in addition to the above course, for which work 5 additional diploma points are allowed.

† Pupils should be given an opportunity to elect either drawing or science at the beginning of the seventh grade and should then continue that study through the eighth grade; otherwise, no diploma credit can be allowed for such work. Every school is expected to offer instruction in drawing and science, but no one pupil in any school will take both subjects.

Intermediate School Course with Clerical Practice.

	VII.	VIII.	Totals.	*Diploma Points.	Prepared Lessons.	Unprepared Lessons.
Unprepared subjects (1 diploma point based on 120 minutes).						
Either one† { Drawing.....	60	60	120	1	None	All
{ Science.....	60	60	120	1	None	All
Manual training, domestic science.....	90	90	180	1	None	All
Music.....	60	60	120	1	None	All
Physical training.....	75	75	150	1	None	All
Penmanship.....	60	30	90	1	None	All
Hygiene.....	60	60	120	1	None	All
Prepared subjects (1 diploma point based on 80 minutes).						
English.....	300	300	600	5	8	12
Composition, oral and written; reading and literature; spelling.						
Mathematics and clerical practice.....	180	180	360	4	8	4
Geography.....	150	150	300	3	4	6
History.....	120	120	240	2	4	4
Study time.....	150	150	300			
Recesses.....	100	100	200			
Opening exercises.....	25	25	50			
Optional time.....	70	100	170			
Totals.....	1,500	1,500	3,000	*20	24	26

* Qualified pupils may take a modern foreign language in addition to the above course, for which work 5 additional diploma points are allowed.

† Pupils should be given an opportunity to elect either drawing or science at the beginning of the seventh grade and should then continue that study through the eighth grade; otherwise, no diploma credit can be allowed for such work. Every school is expected to offer instruction in drawing and science, but no one pupil in any school will take both subjects.

Intermediate School Industrial or Prevocational Course.

As yet no comprehensive course of study has been formulated for those pupils who are to leave school to enter industry at the end of the seventh, eighth, or ninth grade. Such a tentative course for girls is in operation in the Hancock School. It is expected that this course will be formulated at an early date. The

industrial or prevocational course for boys in intermediate schools will follow in general the type which has been established for prevocational classes.

(a) *Changes in Time Allotments.*

For intermediate school purposes slight changes have been made as follows in the "suggested" time allotments of subjects in the seventh and eighth grade course of study for elementary schools.

DRAWING.—From 90 minutes Elementary School to 60 minutes Intermediate School.

ENGLISH.—From 240 minutes Elementary School to 300 minutes Intermediate School.

Otherwise, there are no changes in the time allotments for Grades VII and VIII as published in School Document No. 13, pages 67 and 68.

Instructions in the paragraph at the top of page 67 regarding variations in time allotments in intermediate schools are abrogated by the publication of the specific time allotments on pages 10 and 11 of this report.

Attention is directed to the fact that the 150 minutes for modern foreign language instruction has been increased to 210 minutes in Grade VII and also in Grade VIII.

The most important innovation in the reorganization of the course of study for intermediate schools is the provision of 30 minutes per day for study for all pupils in Grades VII and VIII who do not take a modern foreign language. Furthermore, as in courses of study already issued for preceding grades, optional time is provided for Grades VII and VIII to be used by the master or the teacher as the needs of the class may require.

(b) *Computing Diploma Points in Unprepared Subjects.*

The formula for computing diploma points for unprepared subjects is 120 minutes of time in class for 1 diploma point. This is 50 per cent more than is at present required in the high school. With the exception

of penmanship, the total amount of time devoted to each unprepared subject in Grades VII and VIII combined is 120 minutes. Each unprepared subject is allowed one diploma point toward a hundred point high school diploma.

Penmanship is one 30-minute period short of the standard of 120 minutes for one point. This is because only 30 minutes per week are suggested for penmanship in Grade VIII. If by that time pupils shall have acquired satisfactory skill in handwriting, they should practice only enough to retain that skill. If masters find that pupils need more practice, some of the optional time provided in Grade VIII should be devoted to penmanship.

Manual training and domestic science receive slightly more than the standard of 120 minutes, because some time is taken in preparing for the lesson and in cleaning up after the lesson is completed.

Physical training is given also one extra 30-minute period over and above this standard because physical training is understood to cover the setting up drills or exercises which occur in the middle of the morning and afternoon sessions as well as the regular physical training work of one hour per week.

Science has been grouped with drawing and masters should allow pupils to take one or the other. It will be noted that for the pupils who do not take modern foreign language the optional time in Grades VII and VIII provides a sufficient amount of time for the teaching of both. However, diploma credit will be allowed for only one subject and not for two. This restriction is necessary because pupils not taking modern foreign language are permitted to earn a total of only 20 points in Grades VII and VIII.

(c) *Computing Diploma Points in Prepared Subjects.*

A glance at the four subjects classified as prepared subjects will show no such obvious unit of time for a diploma point as was found for the unprepared subjects.

Furthermore, since these prepared subjects may legitimately require varying amounts of preparation outside of class, the diploma points for them have been determined on the basis of a fixed number of prepared and unprepared recitations in each subject.

As in the high school in reckoning diploma points a prepared lesson is considered worth twice as much as an unprepared lesson. Thirty-minute periods are assumed. The computation is based upon the total amount of time devoted to the subject in both Grades VII and VIII. One diploma point is allowed for each 80 minutes of prepared lessons. This is approximately twice as much time as is required in the high school for a diploma point. Because it is important, not only as indicating the method of arriving at the number of diploma points, but also as indicating what is expected of each pupil in intermediate schools, the methods by which these diploma points were computed is here presented in full.

ENGLISH. (600 Minutes, 5 Diploma Points.)

The 5 diploma points in English are allowed for 8 prepared and 12 unprepared 30-minute periods of work in combined Grades VII and VIII, based on the following computation:

8 prepared lessons per week of 30 minutes each = 240 minutes.
12 unprepared lessons per week (one half of 360) = 180 minutes.

$$\begin{array}{r} 80 \overline{)420} \\ 5.25 \end{array}$$

MATHEMATICS. (360 Minutes, 4 Diploma Points.)

The 4 diploma points in mathematics are allowed for 8 prepared and 4 unprepared 30-minute periods of work in combined Grades VII and VIII, based on the following computation:

8 prepared lessons per week of 30 minutes each = 240 minutes.
4 unprepared lessons per week (one half of 120) = 60 minutes.

$$\begin{array}{r} 80 \overline{)300} \\ 3.75 \end{array}$$

GEOGRAPHY. (300 Minutes, 3 Diploma Points.)

The 3 diploma points in geography are allowed for 4 prepared and 6 unprepared 30-minute periods of work in combined Grades VII and VIII, based on the following computation:

4 prepared lessons per week of 30 minutes each = 120 minutes.

6 unprepared lessons per week (one half of 180) = 90 minutes.

$$\begin{array}{r} 80 \overline{)210} \\ \underline{200} \\ 10 \\ 2.625 \end{array}$$

HISTORY. (240 Minutes, 2 Diploma Points.)

The 2 diploma points for history are allowed for 4 prepared and 4 unprepared 30-minute periods of work in combined Grades VII and VIII, based on the following computation:

4 prepared lessons per week of 30 minutes each = 120 minutes.

4 unprepared lessons per week (one half of 120) = 60 minutes.

$$\begin{array}{r} 80 \overline{)180} \\ \underline{160} \\ 20 \\ 2.25 \end{array}$$

MODERN FOREIGN LANGUAGE. (420 Minutes, 5 Diploma Points.)

The 5 diploma points in modern foreign language are allowed for 8 prepared and 8 unprepared 30-minute periods of work in combined Grades VII and VIII, based on the following computation:

8 prepared lessons per week of 30 minutes each = 240 minutes.

8 unprepared lessons per week (one half of 180) = 90 minutes.

$$\begin{array}{r} 80 \overline{)330} \\ \underline{320} \\ 10 \\ 4.125 \end{array}$$

On the basis of a strict mathematical computation this subject would be allowed only 4 diploma points. There are, however, considerations which seem to justify allowing it 5 diploma points. Modern foreign language is the only subject taught in Grades VII and VIII which may be considered distinctly a secondary school subject. Furthermore, the Board of Superintendents requires

that the work in modern foreign language in intermediate schools be largely oral. Such oral instruction requires much class practice with the teacher, for a large part of which very little, if any, preparation can be made by the pupil either at home or in his study period. Attention is also called to the fact that 80 minutes is the basis for a diploma point in prepared work in the intermediate schools, whereas only 40 minutes is required for a diploma point in the high school.

(d) *Distribution of Prepared and Unprepared Lessons.*

The number of prepared and unprepared lessons as determined in the preceding computations is indicated in the following tabulation:

SUBJECTS.	Prepared.	Unprepared.
English.....	8	12
Mathematics.....	8	4
Geography.....	4	6
History.....	4	4
Totals.....	24	26
Modern Foreign Language.....	8	8
Totals.....	32	34

The above tabulation is to be interpreted as follows: In English each pupil is required to prepare outside of recitation periods, either in the study period or at home, at least 8 lessons per week as a prerequisite for 5 diploma points in English. Masters are expected to prepare a schedule of prepared lessons so that each subject will receive its assigned number, and also so that they will be as evenly distributed as possible for the pupil throughout the week.

The previous tabulation showed the total number of unprepared and prepared lessons required in the various subjects in combined Grades VII and VIII for the diploma points assigned to those subjects. The following tabulation indicates that those prepared lessons should be equally distributed between Grade VII and Grade VIII in each subject:

SUBJECTS.	Grade VII.	Grade VIII.
English.....	4	4
Mathematics.....	4	4
Geography.....	2	2
History.....	2	2
Totals.....	12	12

The above tabulation is to be interpreted as follows: Pupils pursuing the above studies in Grade VII or in Grade VIII are expected to have 12 prepared lessons per week, each lesson to require approximately 30 minutes of preparation. This should be considered a minimum; some pupils may require more time than others to learn a 30-minute assignment.

Five of these 12 lessons can be learned in the daily study period provided for in the time allotments, leaving 7 lessons to be learned at home throughout each week. On a mathematical basis these 7 home lessons would require $3\frac{1}{2}$ hours per week. However, it is probable that some pupils will find it necessary to spend approximately one hour daily in home study. The Rules and Regulations provide that pupils shall not be assigned home lessons which require more than one hour of study per day. (Section 389, page 107, Rules 1912.)

The division of prepared and unprepared recitations in modern foreign language instruction is left to the master.

In view of the nature of the work there should be fewer prepared lessons in Grade VII than in Grade VIII; in fact, the number of prepared lessons in modern foreign language should be gradually increased from Grade VII through Grade IX.

REGULAR 20-POINT PROGRAM.

The new standard of 100 diploma points for graduation from an intermediate and senior high school course contemplates that pupils will earn 20 diploma points each year. The successful pursuit of the regular course in Grades VII and VIII will earn for pupils 20 diploma points. As has already been indicated, such pupils are expected to have 12 prepared lessons per week, involving as a maximum one hour of study per day outside of school. All such pupils also have one 30-minute study period in school each day throughout the seventh and eighth grades.

Pupils pursuing a 20-point program are divided into two groups: Those pursuing a course of study for college preparation and those pursuing a course of study leading to a commercial course in the senior high school. The only difference in the course of study for the two groups of pupils lies in the fact that the former group pursues the mathematics course, as outlined in School Document No. 12, 1916. The latter group pursues a combined mathematics and clerical practice course based on a combination of the mathematics and clerical practice courses of study as published. (See School Document No. 7, 1918.) Each of these courses begins in Grade VII and extends through Grade VIII. In other respects the content of the courses for the two groups is identical throughout the first and second years of the intermediate school.

SPECIAL 25-POINT PROGRAM.

Especially qualified pupils who at the end of Grade VI meet the scholarship standards hereafter to be established by the Board of Superintendents may elect a

modern foreign language in addition to the 20-point program described above. The number of pupils permitted to elect a 25-point program in any school should not exceed approximately 50 per cent of the pupils in Grade VII.

Time for modern foreign language instruction is to be found by combining the optional time provided in Grades VII and VIII and the time devoted by other pupils to study periods in school. Pupils pursuing a special 25-point program in Grades VII and VIII will find it necessary to do all of their studying at home. It is the opinion of the committee that these more capable pupils carrying a modern foreign language will not need to devote more study to their five prepared studies than the ordinary pupils will be required to devote to the four prepared subjects which they carry.

While it is to be regretted that pupils pursuing a 25-point program have no time for study in school, the committee finds no way of providing for such study periods under the restrictions of the present school day. Study periods for pupils can be provided only by lengthening the school day.

As has been pointed out, the amount of home study in modern foreign language which can be required is limited, owing to the nature of the modern foreign language work. Relatively more prepared lessons can be required in Grade VIII than in Grade VII. The additional work required of pupils outside of school, therefore, in the pursuit of a special 25-point program, is not so great as might be thought on first consideration.

PREPARED AND UNPREPARED SUBJECTS.

Grade IX.—Intermediate Schools.

The three courses of study offered in Grade IX are to be found on pages 63, 64 and 65 of School Document No. 13, 1918. The following tabulation shows the

subjects which require no preparation outside of class, the number of 30-minute periods per week, and the diploma points allowed each.

	Number 30-Minute Periods.	Diploma Points.
Unprepared subjects:		
Art appreciation.....	2	1
Choral practice.....	1	1
Hygiene.....	1	1
Physical training.....	3	2
Totals.....	7	5

All other subjects in Grade IX presuppose an amount of study outside of class equivalent to the time spent in class recitation.

LENGTH OF RECITATION PERIODS.

Inasmuch as most of the intermediate schools now organized are located in buildings accommodating also elementary school pupils of earlier grades, certain conditions restrict the possibilities of organization. The ordinary elementary school day is from 9 a. m. until 12 o'clock, with a 20-minute recess period somewhere between 10.30 and 11 o'clock. The afternoon session usually extends from 1.30 to 3.30. This division of the day has been one of the factors which has determined the suggested schedule of periods for the intermediate schools to be found on page 72 of School Document No. 13, 1918. If the school day is divided into 30-minute periods, the result will be 5 periods in the morning and 4 periods in the afternoon, or a total of 9 periods per day and 45 periods per week.

Evidence is being accumulated from time to time with regard to the working of the suggested 30-minute

period. Some schools have provided for both 30-minute and 40-minute periods. Masters who desire to modify the suggested schedule may secure permission from the Board of Superintendents if conditions warrant such modifications. The conference committee feels that perhaps a 40-minute period is preferable to a 30-minute period, but sees no way of introducing 40-minute periods without modifying the length of the morning session and changing the time of the recess. This does not seem desirable at this time.

SUGGESTED POSSIBILITIES OF PROGRAMS, GRADE IX.

The conference committee feels that masters will welcome suggestions with regard to possible courses of study which ninth-grade pupils may pursue in intermediate schools. To that end the following suggested programs are presented. The programs are those based on the academic course of study, which is primarily for those pupils preparing for college. The same general programs may be organized for pupils anticipating a commercial course in the senior high school by the substitution of clerical practice for the required foreign language.

Every pupil pursuing an academic course is required to take the following subjects whatever his elective subjects may be:

Required Subjects:	High School Diploma Points.
Art appreciation	1
Choral practice	1
Hygiene-physiology	1
Physical training	2
English	5
Foreign language	5
Total	<hr/> 15

In addition to the 15 points of prescribed work every pupil is expected to elect one or more subjects to com-

plete his program of studies. The following are suggested programs for Grade IX:

20-Point Program.

A pupil pursuing a 20-point program in the academic course in Grade IX would take subjects as follows:

Required subjects as indicated above	15 points.
Elective subjects:	
Foreign language or mathematics	5 points.
Total	<hr/> 20 points.

The required foreign language would naturally be the one which the pupil has taken through Grades VII and VIII and the elective language would be a language begun in the ninth year.

A pupil carrying a 20-point program would spend 28 of the 45 periods per week in recitations, leaving 17 periods for study in the school. Of the 28 periods of recitation 21 periods are prepared work for which an equal number of periods of preparation are required. Seventeen of these 30-minute periods required for study are provided for in the school. The pupil is expected to spend from three-quarters of an hour to an hour each day in home study.

21-Point Program.

Required subjects, as above	15 points.
Elective subjects:	
Introductory science	3 points.
Ancient history	3 points.
Total	<hr/> 21 points.

A pupil carrying a 21-point program would spend 29 of the 45 periods per week in recitations, leaving 16 periods for study in the school. Of the 29 periods of recitation 22 periods are prepared work for which an equal number of periods of preparation are required. Sixteen of these 30-minute periods required for study are provided for in the school. The pupil is expected to spend an hour each day in home study.

23-Point Program.

Required subjects, as above	15 points.
Elective subjects:	
Modern foreign language or mathematics	5 points.
Introductory science or history	3 points.
Total	<u>23 points.</u>

A pupil carrying a 23-point program would spend 32 of the 45 periods per week in recitations, leaving 13 periods for study in the school. Of the 32 periods of recitation 25 periods are prepared work for which an equal number of periods of preparation are required. Thirteen of these 30-minute periods required for study are provided for in the school. The pupil is expected to spend an hour each day in home study.

25-Point Program.

Required subjects, as above	15 points.
First possibility:	
Elective subjects:	
Modern foreign language	5 points.
Mathematics	5 points.
Total	<u>25 points.</u>

Second possibility:

Elective subjects:	
Modern foreign language or mathematics,	5 points.
Introductory science	3 points.
Ancient history	3 points.
Total	<u>26 points.</u>
Allowed to make	25 points.

Pupils who desire to take history and introductory science in lieu of either an additional foreign language or mathematics may defer the taking of hygiene to a later year. Under such circumstances the above program under the second possibility would result in a 25-point program and would be allowed.

SCHOOL DOCUMENT NO. 3—1919 BOSTON PUBLIC SCHOOLS

ARITHMETIC

PRACTICE EXERCISES IN COMMON FRACTIONS

BULLETIN NO. XVIII. OF THE DEPARTMENT OF
EDUCATIONAL INVESTIGATION AND MEASUREMENT



JANUARY, 1919

CITY OF BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, BOSTON, January 29, 1919.

Ordered, That three thousand (3,000) copies of a bulletin on "Practice Exercises in Common Fractions," prepared by the Department of Educational Investigation and Measurement and approved by the Board of Superintendents at its meeting on January 24, 1919, be printed as a school document.

Attest:

THORNTON D. APOLLONIO,
Secretary.

INTRODUCTION.

The manuscript for this bulletin was approved for publication as a school document by the Board of Superintendents at its meeting on January 24, 1919.

The bulletin contains an analysis of the various types of computation involved in the addition, subtraction, multiplication, and division of common fractions. Under each type of process there has been listed a considerable number of practice examples, which provide the teacher with material for practice work after instruction has been given in the methods of computation.

The bulletin will be of interest to all teachers who teach common fractions. Attention of teachers is called to the fact that it is not necessary to teach the types of problems in the order in which they are given or to use the examples illustrating the type in the order in which they have been arranged. Care has been exercised in arranging the forty practice examples in such a way that generally examples in the first column are considered the easiest, and those in the last column the most difficult. Teachers, however, may use the material in such a manner as may best serve their purposes.

The manuscript was prepared for the printer by Mr. Arthur W. Kallom, assistant director of the department. The examples were prepared by a committee working under the supervision of Mr. Kallom, as follows: Clarence H. Jones, *Chairman*; Gertrude E. Bigelow, Alton C. Churbuck (deceased), John J. Cummings, Arthur L. Gould, Frances G. Keyes, Olivia C. Penell, William L. Vosburgh.

FRANK W. BALLOU,
Assistant Superintendent in Charge.

PRACTICE EXERCISES IN COMMON FRACTIONS.

During the last three years experimental testing has been done in the four operations in common fractions. The results of these tests were presented to the teachers in Bulletins No. VII and XV. The present bulletin is prepared to assist teachers to correct the errors which the tests showed were common.

This bulletin consists of four parts, one each devoted to addition, subtraction, multiplication, and division. In each instance the analysis as given in the course of study is presented, followed by forty examples for drill work under each type whenever that number is available. For best results the bulletin should be used with the set of Boston Fraction Sheets prepared by the department.

It will be noted that only fractions having a denominator smaller than 16 have been used throughout. Even fractions with denominators of 7, 9, 11 and 13 have been largely eliminated.

ADDITION.

There are fourteen distinct types in the addition of fractions. The selection of these types is based on two factors: (1) the method of finding the common denominator, and (2) whether the answer is reducible or non-reducible. An analysis of the fourteen types, with an illustration of each, is given on pages 5 and 6. This is the same analysis as given on pages 45 and 46 of the fifth grade course of study, and pages 42 and 43 of the sixth grade course of study.

Following this analysis are forty practice examples in each type whenever that number of examples is available. If examples involving mixed numbers are desired, suitable integers may be used with the fractions under each type.

It is recommended that examples involving more than two fractions be reserved for seventh and eighth grades.

TYPES IN ADDITION OF FRACTIONS

A.—*Similar*

Non-reducible

Type I.— Answer in final form

$$\text{Example: } \frac{2}{5} + \frac{1}{5} = \frac{3}{5}$$

Reducible

Type II.— To integers or mixed numbers

$$\text{Example: } \frac{4}{7} + \frac{4}{7} = \frac{8}{7} = 1\frac{1}{7}$$

Type III.— To lowest terms

$$\text{Example: } \frac{5}{9} + \frac{1}{9} = \frac{6}{9} = \frac{2}{3}$$

Type IV.— To lowest terms and mixed numbers

$$\text{Example: } \frac{5}{6} + \frac{5}{6} = \frac{10}{6} = \frac{5}{3} = 1\frac{2}{3}$$

B.—*Dissimilar*

1. Denominator of one the common denominator

Non-reducible

Type V

$$\text{Example: } \frac{1}{2} + \frac{3}{8} = \frac{7}{8}$$

Reducible

Type VI.— To mixed numbers

$$\text{Example: } \frac{2}{5} + \frac{7}{10} = \frac{11}{10} = 1\frac{1}{10}$$

Type VII.— To lowest terms

$$\text{Example: } \frac{1}{2} + \frac{3}{10} = \frac{8}{10} = \frac{4}{5}$$

Type VIII.— To lowest terms and mixed numbers

$$\text{Example: } \frac{3}{4} + \frac{5}{12} = \frac{14}{12} = \frac{7}{6} = 1\frac{1}{6}$$

2. Common denominator the product of the denominators

Non-reducible

Type IX

$$\text{Example: } \frac{2}{5} + \frac{3}{8} = \frac{31}{40}$$

Reducible

Type X.— To mixed numbers

$$\text{Example: } \frac{2}{3} + \frac{3}{4} = \frac{17}{12} = 1\frac{5}{12}$$

3. Common denominator to be found by factoring

Non-reducible

Type XI

$$\text{Example: } \frac{1}{6} + \frac{2}{9} = \frac{7}{18}$$

Reducible

Type XII.— To mixed numbers

$$\text{Example: } \frac{1}{4} + \frac{5}{6} = \frac{13}{12} = 1\frac{1}{12}$$

Type XIII.— To lowest terms

$$\text{Example: } \frac{1}{6} + \frac{2}{15} = \frac{9}{30} = \frac{3}{10}$$

Type XIV.— To lowest terms and mixed numbers

$$\text{Example: } \frac{7}{10} + \frac{9}{14} = \frac{94}{70} = \frac{47}{35} = 1\frac{12}{35}$$

ADDITION TYPE I

Similar

Non-reducible

$\frac{1}{8}$	$\frac{1}{7}$	$\frac{2}{7}$	$\frac{2}{9}$	$\frac{1}{11}$	$\frac{2}{11}$	$\frac{3}{11}$	$\frac{2}{15}$	$\frac{1}{5}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{2}{7}$	$\frac{3}{7}$	$\frac{2}{9}$	$\frac{4}{11}$	$\frac{5}{11}$	$\frac{4}{11}$	$\frac{2}{15}$	$\frac{2}{5}$	$\frac{3}{7}$
$\frac{2}{7}$	$\frac{2}{9}$	$\frac{1}{11}$	$\frac{2}{11}$	$\frac{3}{11}$	$\frac{2}{15}$	$\frac{1}{5}$	$\frac{1}{7}$	$\frac{3}{7}$	$\frac{4}{9}$
$\frac{4}{7}$	$\frac{5}{9}$	$\frac{7}{11}$	$\frac{6}{11}$	$\frac{5}{11}$	$\frac{11}{15}$	$\frac{3}{5}$	$\frac{4}{7}$	$\frac{3}{7}$	$\frac{4}{9}$
$\frac{1}{11}$	$\frac{2}{11}$	$\frac{4}{11}$	$\frac{4}{15}$	$\frac{2}{5}$	$\frac{1}{7}$	$\frac{1}{9}$	$\frac{1}{11}$	$\frac{2}{11}$	$\frac{2}{11}$
$\frac{8}{11}$	$\frac{7}{11}$	$\frac{5}{11}$	$\frac{4}{15}$	$\frac{2}{5}$	$\frac{5}{7}$	$\frac{4}{9}$	$\frac{1}{11}$	$\frac{3}{11}$	$\frac{8}{11}$
$\frac{1}{15}$	$\frac{4}{15}$	$\frac{1}{7}$	$\frac{2}{7}$	$\frac{1}{9}$	$\frac{1}{11}$	$\frac{2}{11}$	$\frac{3}{11}$	$\frac{1}{15}$	$\frac{7}{15}$
$\frac{7}{15}$	$\frac{7}{15}$	$\frac{1}{7}$	$\frac{2}{7}$	$\frac{7}{9}$	$\frac{3}{11}$	$\frac{4}{11}$	$\frac{3}{11}$	$\frac{13}{15}$	$\frac{7}{15}$

ADDITION TYPE II

Similar

Reducible. To integers or mixed numbers

$\frac{1}{2}$	$\frac{1}{7}$	$\frac{4}{7}$	$\frac{1}{8}$	$\frac{5}{9}$	$\frac{6}{11}$	$\frac{3}{14}$	$\frac{8}{15}$	$\frac{2}{5}$	$\frac{2}{7}$
$\frac{1}{2}$	$\frac{6}{7}$	$\frac{5}{7}$	$\frac{7}{8}$	$\frac{8}{9}$	$\frac{9}{11}$	$\frac{11}{14}$	$\frac{14}{15}$	$\frac{3}{5}$	$\frac{6}{7}$
$\frac{4}{7}$	$\frac{3}{8}$	$\frac{7}{9}$	$\frac{8}{11}$	$\frac{2}{15}$	$\frac{11}{15}$	$\frac{2}{5}$	$\frac{3}{7}$	$\frac{5}{7}$	$\frac{1}{9}$
$\frac{6}{7}$	$\frac{5}{8}$	$\frac{7}{9}$	$\frac{8}{11}$	$\frac{13}{15}$	$\frac{11}{15}$	$\frac{4}{5}$	$\frac{4}{7}$	$\frac{5}{7}$	$\frac{8}{9}$
$\frac{8}{9}$	$\frac{8}{11}$	$\frac{7}{15}$	$\frac{1}{16}$	$\frac{3}{5}$	$\frac{3}{7}$	$\frac{5}{7}$	$\frac{2}{9}$	$\frac{3}{10}$	$\frac{9}{11}$
$\frac{8}{9}$	$\frac{10}{11}$	$\frac{8}{15}$	$\frac{15}{16}$	$\frac{4}{5}$	$\frac{6}{7}$	$\frac{6}{7}$	$\frac{8}{9}$	$\frac{7}{10}$	$\frac{10}{11}$
$\frac{8}{15}$	$\frac{5}{16}$	$\frac{4}{5}$	$\frac{4}{7}$	$\frac{6}{7}$	$\frac{4}{9}$	$\frac{5}{11}$	$\frac{1}{12}$	$\frac{8}{15}$	$\frac{7}{16}$
$\frac{8}{15}$	$\frac{11}{16}$	$\frac{4}{5}$	$\frac{4}{7}$	$\frac{6}{7}$	$\frac{7}{9}$	$\frac{7}{11}$	$\frac{11}{12}$	$\frac{11}{15}$	$\frac{9}{16}$

ADDITION TYPE III

Similar

Reducible. To lowest terms

$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{3}{14}$	$\frac{1}{16}$	$\frac{9}{16}$	$\frac{3}{16}$	$\frac{1}{6}$	$\frac{1}{9}$
$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{10}$	$\frac{7}{12}$	$\frac{9}{14}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{11}{16}$	$\frac{1}{6}$	$\frac{2}{9}$
$\frac{1}{10}$	$\frac{5}{12}$	$\frac{1}{15}$	$\frac{1}{16}$	$\frac{3}{16}$	$\frac{5}{16}$	$\frac{1}{8}$	$\frac{1}{9}$	$\frac{3}{10}$	$\frac{1}{14}$
$\frac{7}{10}$	$\frac{5}{12}$	$\frac{2}{15}$	$\frac{5}{16}$	$\frac{3}{16}$	$\frac{5}{16}$	$\frac{1}{8}$	$\frac{5}{9}$	$\frac{3}{10}$	$\frac{3}{14}$
$\frac{1}{15}$	$\frac{1}{16}$	$\frac{3}{16}$	$\frac{5}{16}$	$\frac{1}{8}$	$\frac{2}{9}$	$\frac{1}{12}$	$\frac{1}{14}$	$\frac{1}{15}$	$\frac{1}{16}$
$\frac{8}{15}$	$\frac{7}{16}$	$\frac{5}{16}$	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{4}{9}$	$\frac{1}{12}$	$\frac{9}{14}$	$\frac{11}{15}$	$\frac{9}{16}$
$\frac{3}{16}$	$\frac{5}{16}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{3}{14}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{3}{16}$	$\frac{7}{16}$
$\frac{7}{16}$	$\frac{7}{16}$	$\frac{5}{8}$	$\frac{1}{10}$	$\frac{5}{12}$	$\frac{5}{14}$	$\frac{1}{16}$	$\frac{11}{16}$	$\frac{9}{16}$	$\frac{7}{16}$

ADDITION TYPE IV

Similar

Reducible. To lowest terms and mixed numbers

$\frac{3}{4}$	$\frac{7}{8}$	$\frac{9}{10}$	$\frac{5}{14}$	$\frac{7}{15}$	$\frac{3}{16}$	$\frac{7}{16}$	$\frac{11}{16}$	$\frac{5}{6}$	$\frac{4}{9}$
$\frac{3}{4}$	$\frac{7}{8}$	$\frac{9}{10}$	$\frac{13}{14}$	$\frac{11}{15}$	$\frac{15}{16}$	$\frac{15}{16}$	$\frac{11}{16}$	$\frac{5}{6}$	$\frac{8}{9}$
$\frac{5}{12}$	$\frac{9}{14}$	$\frac{7}{15}$	$\frac{5}{16}$	$\frac{9}{16}$	$\frac{11}{16}$	$\frac{3}{8}$	$\frac{3}{10}$	$\frac{7}{12}$	$\frac{9}{14}$
$\frac{11}{12}$	$\frac{9}{14}$	$\frac{13}{15}$	$\frac{13}{16}$	$\frac{9}{16}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{9}{10}$	$\frac{7}{12}$	$\frac{13}{14}$
$\frac{11}{15}$	$\frac{5}{16}$	$\frac{9}{16}$	$\frac{11}{16}$	$\frac{5}{8}$	$\frac{7}{10}$	$\frac{7}{12}$	$\frac{11}{14}$	$\frac{11}{15}$	$\frac{7}{16}$
$\frac{13}{15}$	$\frac{15}{16}$	$\frac{11}{16}$	$\frac{15}{16}$	$\frac{5}{8}$	$\frac{7}{10}$	$\frac{11}{12}$	$\frac{11}{14}$	$\frac{14}{15}$	$\frac{11}{16}$
$\frac{9}{16}$	$\frac{13}{16}$	$\frac{5}{8}$	$\frac{7}{10}$	$\frac{11}{12}$	$\frac{4}{15}$	$\frac{13}{15}$	$\frac{7}{16}$	$\frac{9}{16}$	$\frac{13}{16}$
$\frac{13}{16}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{9}{10}$	$\frac{11}{12}$	$\frac{14}{15}$	$\frac{14}{15}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{15}{16}$

ADDITION TYPE V

Dissimilar

1. Denominator of one the common denominator

Non-reducible

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{7}{16}$	$\frac{1}{5}$	$\frac{3}{5}$	$\frac{1}{7}$	$\frac{1}{16}$	$\frac{1}{2}$	$\frac{1}{3}$
$\frac{1}{4}$	$\frac{2}{9}$	$\frac{1}{15}$	$\frac{1}{4}$	$\frac{1}{15}$	$\frac{3}{10}$	$\frac{11}{14}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{5}{9}$
$\frac{1}{4}$	$\frac{9}{16}$	$\frac{1}{5}$	$\frac{4}{5}$	$\frac{4}{7}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{8}$	$\frac{1}{4}$	$\frac{8}{15}$	$\frac{1}{10}$	$\frac{1}{14}$	$\frac{3}{8}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{5}{8}$	$\frac{11}{16}$
$\frac{2}{5}$	$\frac{4}{5}$	$\frac{1}{8}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{2}{15}$	$\frac{1}{6}$
$\frac{3}{10}$	$\frac{1}{15}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{8}{15}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{2}{5}$	$\frac{5}{12}$
$\frac{1}{8}$	$\frac{5}{8}$	$\frac{7}{16}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{14}$	$\frac{1}{8}$	$\frac{5}{8}$
$\frac{9}{16}$	$\frac{1}{16}$	$\frac{1}{2}$	$\frac{1}{9}$	$\frac{3}{16}$	$\frac{1}{10}$	$\frac{8}{15}$	$\frac{1}{7}$	$\frac{13}{16}$	$\frac{3}{16}$

ADDITION TYPE VI

Dissimilar

1. Denominator of one the common denominator

Reducible. To mixed numbers

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{11}{12}$	$\frac{3}{4}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{4}{7}$	$\frac{13}{16}$	$\frac{1}{2}$	$\frac{1}{3}$
$\frac{3}{4}$	$\frac{5}{6}$	$\frac{2}{3}$	$\frac{7}{16}$	$\frac{9}{10}$	$\frac{7}{15}$	$\frac{9}{14}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{8}{9}$
$\frac{2}{3}$	$\frac{3}{4}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{9}{14}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{13}{16}$	$\frac{3}{4}$
$\frac{13}{15}$	$\frac{11}{16}$	$\frac{7}{10}$	$\frac{14}{15}$	$\frac{5}{7}$	$\frac{15}{16}$	$\frac{7}{8}$	$\frac{14}{15}$	$\frac{1}{4}$	$\frac{15}{16}$
$\frac{3}{5}$	$\frac{7}{12}$	$\frac{1}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{8}$	$\frac{1}{5}$	$\frac{3}{5}$	$\frac{2}{7}$
$\frac{8}{15}$	$\frac{5}{6}$	$\frac{15}{16}$	$\frac{3}{16}$	$\frac{11}{12}$	$\frac{5}{9}$	$\frac{3}{4}$	$\frac{13}{15}$	$\frac{14}{15}$	$\frac{11}{14}$
$\frac{3}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{8}{9}$	$\frac{3}{4}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{3}{7}$	$\frac{5}{8}$	$\frac{7}{16}$
$\frac{13}{16}$	$\frac{5}{16}$	$\frac{13}{16}$	$\frac{2}{3}$	$\frac{7}{8}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{9}{14}$	$\frac{9}{16}$	$\frac{7}{8}$

ADDITION TYPE VII

Dissimilar

1. Denominator of one the common denominator
 Reducible. To lowest terms

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{10}$	$\frac{3}{5}$	$\frac{1}{2}$	$\frac{5}{12}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{2}{15}$	$\frac{1}{5}$	$\frac{1}{15}$	$\frac{1}{10}$	$\frac{1}{3}$	$\frac{1}{12}$	$\frac{2}{15}$	$\frac{1}{12}$
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{7}{15}$	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{7}$
$\frac{3}{10}$	$\frac{1}{15}$	$\frac{5}{12}$	$\frac{1}{5}$	$\frac{7}{12}$	$\frac{1}{14}$	$\frac{4}{15}$	$\frac{7}{12}$	$\frac{2}{5}$	$\frac{5}{14}$
$\frac{1}{2}$	$\frac{7}{15}$	$\frac{3}{4}$	$\frac{2}{5}$	$\frac{2}{7}$	$\frac{5}{14}$	$\frac{2}{3}$			
$\frac{3}{14}$	$\frac{1}{3}$	$\frac{1}{12}$	$\frac{4}{15}$	$\frac{3}{14}$	$\frac{1}{2}$	$\frac{1}{12}$			

ADDITION TYPE VIII

Dissimilar

1. Denominator of one the common denominator
 Reducible. To lowest terms and mixed numbers

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{3}{4}$	$\frac{8}{15}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{13}{15}$	$\frac{1}{2}$	$\frac{2}{3}$
$\frac{5}{6}$	$\frac{13}{15}$	$\frac{5}{12}$	$\frac{4}{5}$	$\frac{7}{10}$	$\frac{5}{6}$	$\frac{7}{12}$	$\frac{4}{5}$	$\frac{9}{10}$	$\frac{7}{12}$
$\frac{3}{4}$	$\frac{5}{12}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{5}{6}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{13}{14}$
$\frac{11}{12}$	$\frac{5}{6}$	$\frac{9}{14}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{11}{12}$	$\frac{11}{14}$	$\frac{11}{15}$	$\frac{9}{10}$	$\frac{4}{7}$
$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{11}{14}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{4}{5}$	$\frac{9}{14}$		
$\frac{13}{14}$	$\frac{14}{15}$	$\frac{11}{15}$	$\frac{5}{7}$	$\frac{11}{12}$	$\frac{11}{12}$	$\frac{7}{10}$	$\frac{6}{7}$		

ADDITION TYPE IX

Dissimilar

2. Common denominator the product of the denominators

Non-reducible

$\frac{1}{2}$	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{3}{8}$	$\frac{4}{9}$	$\frac{1}{2}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{16}$	$\frac{2}{9}$	$\frac{7}{16}$	$\frac{1}{12}$	$\frac{4}{9}$	$\frac{3}{10}$	$\frac{1}{5}$	$\frac{3}{8}$
$\frac{3}{4}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{2}{7}$	$\frac{3}{8}$	$\frac{5}{9}$	$\frac{1}{2}$	$\frac{1}{9}$	$\frac{3}{4}$	$\frac{2}{5}$
$\frac{1}{5}$	$\frac{4}{9}$	$\frac{1}{6}$	$\frac{4}{9}$	$\frac{5}{9}$	$\frac{3}{10}$	$\frac{2}{5}$	$\frac{3}{10}$	$\frac{2}{15}$	$\frac{5}{9}$
$\frac{3}{5}$	$\frac{2}{7}$	$\frac{5}{8}$	$\frac{5}{9}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{7}$
$\frac{3}{8}$	$\frac{7}{10}$	$\frac{1}{9}$	$\frac{5}{16}$	$\frac{5}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{5}{12}$	$\frac{2}{9}$	$\frac{3}{10}$
$\frac{5}{8}$	$\frac{5}{9}$	$\frac{1}{4}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{3}{8}$	$\frac{2}{9}$	$\frac{5}{9}$
$\frac{2}{9}$	$\frac{2}{11}$	$\frac{3}{5}$	$\frac{3}{10}$	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{1}{9}$	$\frac{2}{9}$	$\frac{3}{10}$	$\frac{4}{11}$

ADDITION TYPE X

Dissimilar

2. Common denominator the product of the denominators

Reducible. To mixed numbers

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{3}{7}$	$\frac{6}{7}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$
$\frac{2}{3}$	$\frac{7}{9}$	$\frac{6}{7}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{7}{10}$	$\frac{5}{9}$	$\frac{9}{11}$	$\frac{4}{5}$	$\frac{4}{5}$
$\frac{1}{8}$	$\frac{2}{5}$	$\frac{3}{7}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{3}{5}$
$\frac{8}{9}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{4}{9}$	$\frac{7}{9}$	$\frac{9}{14}$	$\frac{8}{9}$	$\frac{3}{7}$	$\frac{5}{7}$	$\frac{5}{6}$
$\frac{4}{7}$	$\frac{5}{7}$	$\frac{7}{8}$	$\frac{3}{5}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{6}{7}$
$\frac{7}{10}$	$\frac{7}{10}$	$\frac{5}{9}$	$\frac{9}{16}$	$\frac{4}{5}$	$\frac{8}{9}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{5}{12}$	$\frac{5}{8}$
$\frac{7}{9}$	$\frac{3}{5}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{3}{4}$	$\frac{3}{5}$	$\frac{2}{7}$	$\frac{6}{7}$	$\frac{8}{9}$	$\frac{5}{7}$
$\frac{9}{10}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{11}{12}$	$\frac{4}{9}$	$\frac{7}{8}$	$\frac{7}{9}$	$\frac{4}{9}$	$\frac{7}{10}$	$\frac{8}{11}$

ADDITION TYPE XI

Dissimilar

3. Common denominator to be found by factoring

Non-reducible

$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{5}{8}$	$\frac{8}{9}$	$\frac{3}{8}$	$\frac{3}{10}$	$\frac{4}{9}$	$\frac{1}{4}$	$\frac{1}{8}$
$\frac{1}{6}$	$\frac{1}{16}$	$\frac{3}{8}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{3}{10}$	$\frac{1}{16}$	$\frac{8}{15}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{6}$	$\frac{4}{9}$	$\frac{2}{9}$	$\frac{3}{8}$	$\frac{3}{10}$	$\frac{3}{10}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{5}{8}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{5}{12}$	$\frac{9}{16}$	$\frac{5}{12}$	$\frac{1}{8}$	$\frac{1}{12}$	$\frac{4}{9}$	$\frac{4}{15}$
$\frac{1}{6}$	$\frac{4}{9}$	$\frac{2}{9}$	$\frac{3}{10}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{3}{4}$	$\frac{1}{6}$	$\frac{1}{12}$	$\frac{1}{10}$
$\frac{13}{16}$	$\frac{1}{15}$	$\frac{4}{15}$	$\frac{7}{12}$	$\frac{1}{9}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{3}{16}$	$\frac{2}{15}$	$\frac{5}{16}$
$\frac{2}{9}$	$\frac{3}{10}$	$\frac{1}{6}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{14}$	$\frac{1}{10}$	$\frac{4}{9}$	$\frac{5}{12}$
$\frac{8}{15}$	$\frac{3}{16}$	$\frac{1}{15}$	$\frac{3}{10}$	$\frac{2}{9}$	$\frac{3}{10}$	$\frac{3}{16}$	$\frac{13}{16}$	$\frac{2}{15}$	$\frac{3}{16}$

ADDITION TYPE XII

Dissimilar

3. Common denominator to be found by factoring

Reducible. To mixed numbers

$\frac{1}{4}$	$\frac{1}{10}$	$\frac{5}{6}$	$\frac{7}{9}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{8}{9}$	$\frac{9}{10}$	$\frac{1}{4}$	$\frac{1}{12}$
$\frac{5}{6}$	$\frac{11}{12}$	$\frac{5}{8}$	$\frac{5}{12}$	$\frac{7}{10}$	$\frac{3}{10}$	$\frac{7}{12}$	$\frac{7}{16}$	$\frac{9}{10}$	$\frac{14}{15}$
$\frac{5}{6}$	$\frac{7}{9}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{8}{9}$	$\frac{7}{10}$	$\frac{1}{6}$	$\frac{3}{4}$	$\frac{1}{8}$	$\frac{5}{6}$
$\frac{7}{8}$	$\frac{7}{12}$	$\frac{9}{10}$	$\frac{5}{12}$	$\frac{4}{15}$	$\frac{5}{16}$	$\frac{7}{8}$	$\frac{5}{6}$	$\frac{11}{12}$	$\frac{7}{9}$
$\frac{5}{8}$	$\frac{2}{9}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{1}{6}$	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{5}{6}$	$\frac{5}{8}$	$\frac{5}{9}$
$\frac{5}{12}$	$\frac{11}{12}$	$\frac{14}{15}$	$\frac{13}{16}$	$\frac{8}{9}$	$\frac{9}{10}$	$\frac{7}{10}$	$\frac{8}{9}$	$\frac{7}{12}$	$\frac{11}{12}$
$\frac{7}{10}$	$\frac{9}{10}$	$\frac{1}{8}$	$\frac{5}{6}$	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{7}{9}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{7}{16}$	$\frac{3}{16}$	$\frac{9}{10}$	$\frac{3}{8}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{11}{12}$	$\frac{8}{15}$	$\frac{15}{16}$	$\frac{9}{16}$

ADDITION TYPE XIII

Dissimilar

3. Common denominator to be found by factoring

Reducible. To lowest terms

$\frac{1}{6}$	$\frac{5}{6}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{12}$	$\frac{1}{10}$	$\frac{5}{6}$	$\frac{1}{6}$
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{11}{14}$	$\frac{11}{15}$	$\frac{1}{14}$	$\frac{2}{15}$	$\frac{4}{15}$	$\frac{1}{14}$	$\frac{1}{14}$	$\frac{8}{15}$
$\frac{1}{12}$	$\frac{1}{10}$	$\frac{5}{6}$	$\frac{1}{6}$	$\frac{3}{10}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{3}{10}$	$\frac{1}{6}$
$\frac{7}{15}$	$\frac{1}{15}$	$\frac{1}{15}$	$\frac{11}{15}$	$\frac{3}{14}$	$\frac{1}{15}$	$\frac{3}{14}$	$\frac{3}{14}$	$\frac{9}{14}$	$\frac{3}{10}$
$\frac{1}{6}$	$\frac{1}{10}$	$\frac{7}{10}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{7}{10}$			
$\frac{5}{14}$	$\frac{5}{14}$	$\frac{3}{14}$	$\frac{7}{10}$	$\frac{9}{14}$	$\frac{9}{14}$	$\frac{2}{15}$			

ADDITION TYPE XIV

Dissimilar

3. Common denominator to be found by factoring

Reducible. To lowest terms and mixed numbers

$\frac{1}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{7}{10}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{7}{10}$	$\frac{1}{6}$	$\frac{5}{6}$
$\frac{9}{10}$	$\frac{9}{10}$	$\frac{4}{15}$	$\frac{11}{14}$	$\frac{13}{14}$	$\frac{3}{14}$	$\frac{7}{15}$	$\frac{13}{14}$	$\frac{14}{15}$	$\frac{5}{14}$
$\frac{5}{6}$	$\frac{1}{10}$	$\frac{5}{6}$	$\frac{3}{10}$	$\frac{9}{10}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{5}{6}$
$\frac{13}{15}$	$\frac{13}{14}$	$\frac{9}{14}$	$\frac{13}{15}$	$\frac{4}{15}$	$\frac{3}{10}$	$\frac{11}{14}$	$\frac{5}{14}$	$\frac{14}{15}$	$\frac{7}{10}$
$\frac{5}{6}$	$\frac{7}{10}$	$\frac{7}{10}$							
$\frac{13}{14}$	$\frac{9}{14}$	$\frac{7}{15}$							

SUBTRACTION

There are seven distinct types in the subtraction of one fraction from another, and six additional types when integers or mixed numbers are used. The selection of the first six types is based on two factors: (1) the method of finding the common denominator, and (2) whether the answer is reducible or non-reducible. Of the last six types three involve no "borrowing" and three involve "borrowing."

An analysis of these thirteen types, with an illustration of each, is given on pages 14 and 15. Following this analysis are forty practice examples in each type whenever that number is available. No integer larger than 99 has been used in types VIII to XIII, inclusive. Larger whole numbers may be used with the same fraction if teachers desire.

TYPES IN SUBTRACTION OF FRACTIONS.

A.—Similar

Non-reducible

Type I.— Answer in final form

$$\text{Example: } \frac{2}{5} - \frac{1}{5} = \frac{1}{5}$$

Reducible

Type II.— To lowest terms

$$\text{Example: } \frac{7}{9} - \frac{1}{9} = \frac{6}{9} = \frac{2}{3}$$

B.—Dissimilar

1. Denominator of one the common denominator

Non-reducible

Type III

$$\text{Example: } \frac{1}{2} - \frac{3}{8} = \frac{1}{8}$$

Reducible

Type IV.— To lowest terms

$$\text{Example: } \frac{1}{2} - \frac{3}{10} = \frac{2}{10} = \frac{1}{5}$$

2. Common denominator the product of the denominators

Non-reducible

Type V

$$\text{Example: } \frac{2}{5} - \frac{3}{8} = \frac{1}{40}$$

3. Common denominator to be found by factoring

Non-reducible

Type VI

$$\text{Example: } \frac{2}{9} - \frac{1}{6} = \frac{1}{18}$$

Reducible

Type VII.— To lowest terms

$$\text{Example: } \frac{1}{6} - \frac{1}{10} = \frac{2}{30} = \frac{1}{15}$$

C.— Involving Use of Mixed Numbers

1. Involves no borrowing

Type VIII.— Integer from mixed number

$$\text{Example: } 61\frac{1}{2} - 58 = 3\frac{1}{2}$$

Type IX.— Fraction from mixed number

$$\text{Example: } 4\frac{2}{3} - \frac{2}{5} = 4\frac{4}{15}$$

Type X.— Mixed number from mixed number

$$\text{Example: } 61\frac{3}{4} - 58\frac{1}{2} = 3\frac{1}{4}$$

2. Involves borrowing

Type XI.— Mixed number from integer

$$\text{Example: } 61 - 58\frac{1}{2} = 2\frac{1}{2}$$

Type XII.— Fraction from mixed number

$$\text{Example: } 5\frac{2}{5} - \frac{2}{3} = 4\frac{11}{15}$$

Type XIII.— Mixed number from mixed number

$$\text{Example: } 61\frac{1}{2} - 58\frac{3}{4} = 2\frac{3}{4}$$

SUBTRACTION TYPE I

Similar

Non-reducible. Answer in final form

$$\begin{array}{r} \frac{1}{2} \\ \frac{1}{2} \\ \hline \end{array} \quad \begin{array}{r} \frac{2}{5} \\ \frac{1}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{4}{5} \\ \frac{3}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{8}{15} \\ \frac{1}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{4}{15} \\ \frac{2}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{15} \\ \frac{8}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{3}{16} \\ \frac{3}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{2}{8} \\ \frac{1}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{4}{5} \\ \frac{1}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{2}{15} \\ \frac{1}{15} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{11}{15} \\ \frac{4}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{13}{15} \\ \frac{11}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{3}{5} \\ \frac{1}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{3}{5} \\ \frac{2}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{2}{5} \\ \frac{2}{5} \\ \hline \end{array} \quad \begin{array}{r} \frac{1}{8} \\ \frac{1}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{1}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{8}{15} \\ \frac{7}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{16} \\ \frac{9}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{4}{5} \\ \frac{2}{5} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{11}{15} \\ \frac{7}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{13}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{8}{15} \\ \frac{4}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{12} \\ \frac{7}{12} \\ \hline \end{array} \quad \begin{array}{r} \frac{13}{15} \\ \frac{2}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{7}{15} \\ \hline \end{array}$$

SUBTRACTION TYPE II

Similar

Reducible. To lowest terms

$$\begin{array}{r} \frac{3}{4} \\ \frac{1}{4} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{8} \\ \frac{5}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{12} \\ \frac{1}{12} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{15} \\ \frac{1}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{13}{15} \\ \frac{4}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{5}{16} \\ \frac{1}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{16} \\ \frac{3}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{13}{16} \\ \frac{5}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{5}{6} \\ \frac{1}{6} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{10} \\ \frac{1}{10} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{11}{12} \\ \frac{1}{12} \\ \hline \end{array} \quad \begin{array}{r} \frac{13}{15} \\ \frac{1}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{4}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{16} \\ \frac{1}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{16} \\ \frac{3}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{16} \\ \frac{7}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{5}{8} \\ \frac{1}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{10} \\ \frac{1}{10} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{12} \\ \frac{5}{12} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{15} \\ \frac{2}{15} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{13}{15} \\ \frac{8}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{16} \\ \frac{1}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{15}{16} \\ \frac{3}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{16} \\ \frac{7}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{8} \\ \frac{1}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{10} \\ \frac{3}{10} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{12} \\ \frac{7}{12} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{15} \\ \frac{2}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{8}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{15}{16} \\ \frac{1}{16} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{7}{16} \\ \frac{5}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{15}{16} \\ \frac{9}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{7}{8} \\ \frac{3}{8} \\ \hline \end{array} \quad \begin{array}{r} \frac{9}{10} \\ \frac{7}{10} \\ \hline \end{array} \quad \begin{array}{r} \frac{4}{15} \\ \frac{1}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{14}{15} \\ \frac{2}{15} \\ \hline \end{array} \quad \begin{array}{r} \frac{3}{16} \\ \frac{1}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{5}{16} \\ \frac{3}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{16} \\ \frac{5}{16} \\ \hline \end{array} \quad \begin{array}{r} \frac{11}{16} \\ \frac{9}{16} \\ \hline \end{array}$$

SUBTRACTION TYPE III

Dissimilar

Non-reducible. Denominator of one the common denominator

$\frac{3}{4}$	$\frac{7}{8}$	$\frac{11}{12}$	$\frac{11}{15}$	$\frac{14}{15}$	$\frac{1}{2}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{5}{6}$	$\frac{7}{10}$
$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{2}{3}$	$\frac{2}{5}$
$\frac{4}{5}$	$\frac{13}{15}$	$\frac{14}{15}$	$\frac{9}{16}$	$\frac{13}{16}$	$\frac{15}{16}$	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{7}{15}$	$\frac{13}{15}$
$\frac{7}{10}$	$\frac{1}{3}$	$\frac{4}{5}$	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{3}{5}$	$\frac{1}{3}$	$\frac{2}{5}$
$\frac{5}{16}$	$\frac{11}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	$\frac{5}{8}$	$\frac{9}{10}$	$\frac{7}{15}$	$\frac{13}{15}$	$\frac{7}{16}$	$\frac{11}{16}$
$\frac{1}{8}$	$\frac{1}{2}$	$\frac{13}{16}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{3}{5}$	$\frac{1}{5}$	$\frac{4}{5}$	$\frac{3}{8}$	$\frac{3}{8}$
$\frac{15}{16}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{15}{16}$	$\frac{1}{2}$	$\frac{1}{3}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{5}{12}$	$\frac{2}{5}$	$\frac{2}{3}$	$\frac{7}{16}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{1}{6}$

SUBTRACTION TYPE IV

Dissimilar

1. Denominator of one the common denominator

Reducible. To lowest terms

$\frac{5}{6}$	$\frac{5}{12}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{5}{6}$	$\frac{7}{12}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{7}{10}$	$\frac{11}{12}$
$\frac{1}{2}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{3}{5}$	$\frac{1}{2}$	$\frac{2}{3}$
$\frac{11}{15}$	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{11}{12}$	$\frac{11}{15}$	$\frac{1}{2}$	$\frac{9}{10}$	$\frac{11}{12}$	$\frac{13}{15}$	$\frac{1}{4}$
$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{5}$	$\frac{1}{4}$	$\frac{2}{5}$	$\frac{1}{10}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{1}{2}$
$\frac{9}{10}$	$\frac{11}{12}$	$\frac{13}{15}$	$\frac{1}{3}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{4}$
$\frac{2}{5}$	$\frac{1}{6}$	$\frac{1}{5}$	$\frac{1}{12}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{10}$	$\frac{2}{15}$	$\frac{1}{6}$	$\frac{1}{12}$
$\frac{4}{5}$	$\frac{2}{5}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{4}{5}$	$\frac{3}{4}$	$\frac{2}{3}$
$\frac{2}{15}$	$\frac{1}{15}$	$\frac{5}{12}$	$\frac{4}{15}$	$\frac{1}{15}$	$\frac{3}{10}$	$\frac{7}{12}$	$\frac{7}{15}$	$\frac{7}{12}$	$\frac{7}{15}$

SUBTRACTION TYPE V

Dissimilar

2. Common denominator the product of the denominators

Non-reducible

$\frac{2}{3}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{7}{8}$	$\frac{7}{12}$	$\frac{7}{15}$	$\frac{14}{15}$	$\frac{13}{16}$	$\frac{3}{4}$	$\frac{4}{5}$
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{4}{5}$	$\frac{2}{5}$	$\frac{2}{5}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{2}{3}$
$\frac{3}{8}$	$\frac{7}{8}$	$\frac{11}{12}$	$\frac{8}{15}$	$\frac{7}{16}$	$\frac{13}{16}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{5}{8}$	$\frac{7}{10}$
$\frac{1}{5}$	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{3}{8}$	$\frac{1}{3}$	$\frac{3}{5}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{11}{12}$	$\frac{11}{15}$	$\frac{7}{16}$	$\frac{15}{16}$	$\frac{3}{5}$	$\frac{5}{6}$	$\frac{5}{8}$	$\frac{9}{10}$	$\frac{4}{15}$	$\frac{13}{15}$
$\frac{3}{5}$	$\frac{3}{8}$	$\frac{2}{5}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{1}{8}$
$\frac{9}{16}$	$\frac{15}{16}$	$\frac{3}{5}$	$\frac{5}{6}$	$\frac{7}{8}$	$\frac{5}{12}$	$\frac{4}{15}$	$\frac{14}{15}$	$\frac{7}{16}$	$\frac{15}{16}$
$\frac{2}{5}$	$\frac{2}{5}$	$\frac{1}{3}$	$\frac{3}{5}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{5}$	$\frac{4}{5}$

SUBTRACTION TYPE VI

Dissimilar

3. Common denominator found by factoring

Non-reducible

$\frac{5}{6}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{11}{12}$	$\frac{1}{4}$	$\frac{14}{15}$	$\frac{7}{8}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{9}{10}$
$\frac{1}{4}$	$\frac{7}{15}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{6}$	$\frac{3}{10}$	$\frac{7}{12}$	$\frac{2}{15}$	$\frac{3}{4}$	$\frac{3}{4}$
$\frac{9}{10}$	$\frac{1}{8}$	$\frac{14}{15}$	$\frac{14}{15}$	$\frac{5}{16}$	$\frac{15}{16}$	$\frac{5}{8}$	$\frac{7}{10}$	$\frac{7}{12}$	$\frac{5}{12}$
$\frac{7}{8}$	$\frac{1}{10}$	$\frac{1}{6}$	$\frac{9}{10}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{1}{6}$	$\frac{2}{15}$	$\frac{1}{8}$	$\frac{3}{10}$
$\frac{2}{15}$	$\frac{4}{15}$	$\frac{9}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{10}$	$\frac{5}{12}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{3}{16}$
$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{3}{10}$	$\frac{1}{6}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{10}$
$\frac{11}{16}$	$\frac{3}{10}$	$\frac{5}{6}$	$\frac{11}{12}$	$\frac{11}{12}$	$\frac{13}{15}$	$\frac{5}{8}$	$\frac{7}{16}$	$\frac{15}{16}$	
$\frac{3}{10}$	$\frac{1}{12}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{10}$	$\frac{1}{10}$	$\frac{5}{12}$	$\frac{1}{10}$	$\frac{3}{10}$	

SUBTRACTION TYPE VII

Dissimilar

Common denominator found by factoring

Reducible

$\frac{3}{10}$	$\frac{7}{15}$	$\frac{7}{15}$	$\frac{11}{15}$	$\frac{7}{10}$	$\frac{13}{15}$	$\frac{7}{15}$	$\frac{9}{10}$	$\frac{14}{15}$	$\frac{13}{15}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{3}{10}$	$\frac{1}{12}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{5}{12}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{7}{10}$
$\frac{13}{15}$	$\frac{9}{10}$	$\frac{4}{15}$	$\frac{2}{15}$	$\frac{11}{15}$	$\frac{4}{15}$	$\frac{14}{15}$	$\frac{8}{15}$	$\frac{14}{15}$	$\frac{1}{6}$
$\frac{5}{12}$	$\frac{5}{6}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{7}{12}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{7}{12}$	$\frac{1}{10}$
$\frac{1}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{5}{6}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{9}{10}$
$\frac{1}{15}$	$\frac{1}{10}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{2}{15}$	$\frac{8}{15}$	$\frac{11}{15}$	$\frac{2}{15}$	$\frac{8}{15}$	$\frac{1}{15}$
$\frac{9}{10}$	$\frac{5}{12}$	$\frac{5}{12}$	$\frac{7}{12}$	$\frac{7}{12}$	$\frac{11}{12}$				
$\frac{11}{15}$	$\frac{1}{15}$	$\frac{4}{15}$	$\frac{2}{15}$	$\frac{8}{15}$	$\frac{4}{15}$				

SUBTRACTION TYPE VIII

Involving Use of Mixed Numbers

Involves no borrowing. Integer from mixed number

$61\frac{1}{2}$	$16\frac{2}{3}$	$15\frac{1}{10}$
12	9	8
$42\frac{3}{5}$	$46\frac{5}{8}$	$12\frac{3}{16}$
8	12	4
$73\frac{5}{8}$	$75\frac{7}{10}$	$57\frac{9}{16}$
71	9	46
$32\frac{7}{10}$	$42\frac{1}{8}$	$90\frac{3}{10}$
16	17	46
$4\frac{3}{16}$	$38\frac{4}{5}$	$75\frac{1}{5}$
2	34	73

SUBTRACTION TYPE IX

Involving Use of Mixed Numbers

Involves no borrowing. Fraction from mixed number

$4\frac{3}{4}$ $\frac{1}{4}$	$16\frac{5}{12}$ $\frac{1}{12}$	$23\frac{7}{10}$ $\frac{1}{5}$	$14\frac{11}{12}$ $\frac{1}{6}$	$84\frac{5}{8}$ $\frac{1}{8}$	$1\frac{3}{8}$ $\frac{1}{6}$	$47\frac{11}{12}$ $\frac{3}{10}$	$16\frac{7}{15}$ $\frac{3}{10}$
$8\frac{7}{8}$ $\frac{5}{8}$	$26\frac{11}{12}$ $\frac{7}{12}$	$56\frac{9}{10}$ $\frac{2}{5}$	$5\frac{2}{3}$ $\frac{1}{2}$	$38\frac{5}{8}$ $\frac{3}{5}$	$42\frac{3}{10}$ $\frac{1}{4}$	$40\frac{3}{16}$ $\frac{1}{6}$	$83\frac{2}{15}$ $\frac{1}{12}$
$12\frac{7}{8}$ $\frac{3}{8}$	$42\frac{9}{16}$ $\frac{7}{16}$	$92\frac{5}{12}$ $\frac{1}{4}$	$2\frac{3}{4}$ $\frac{2}{3}$	$75\frac{5}{16}$ $\frac{1}{5}$	$38\frac{7}{10}$ $\frac{5}{8}$	$3\frac{3}{10}$ $\frac{1}{6}$	$98\frac{7}{15}$ $\frac{5}{12}$
$46\frac{5}{6}$ $\frac{1}{6}$	$9\frac{5}{6}$ $\frac{1}{6}$	$46\frac{13}{15}$ $\frac{2}{3}$	$17\frac{2}{5}$ $\frac{1}{4}$	$17\frac{13}{16}$ $\frac{2}{8}$	$72\frac{7}{12}$ $\frac{3}{8}$	$7\frac{7}{10}$ $\frac{1}{6}$	$18\frac{11}{15}$ $\frac{7}{12}$
$78\frac{7}{10}$ $\frac{3}{10}$	$7\frac{2}{3}$ $\frac{1}{3}$	$52\frac{11}{12}$ $\frac{3}{4}$	$68\frac{4}{5}$ $\frac{1}{2}$	$8\frac{5}{8}$ $\frac{1}{4}$	$72\frac{5}{12}$ $\frac{1}{10}$	$9\frac{4}{15}$ $\frac{1}{6}$	$39\frac{14}{15}$ $\frac{7}{12}$

SUBTRACTION TYPE X

Involving Use of Mixed Numbers

Involves no borrowing. Mixed number from mixed number

$7\frac{3}{8}$ $5\frac{1}{8}$	$97\frac{8}{15}$ $24\frac{7}{15}$	$42\frac{11}{12}$ $32\frac{2}{3}$	$81\frac{11}{12}$ $17\frac{1}{4}$	$26\frac{7}{8}$ $12\frac{1}{3}$	$9\frac{7}{8}$ $2\frac{1}{6}$	$86\frac{7}{16}$ $29\frac{3}{10}$	$70\frac{4}{15}$ $46\frac{1}{10}$
$8\frac{9}{10}$ $2\frac{7}{10}$	$72\frac{7}{16}$ $47\frac{3}{16}$	$98\frac{5}{12}$ $44\frac{1}{6}$	$9\frac{3}{4}$ $4\frac{1}{3}$	$46\frac{5}{12}$ $16\frac{2}{5}$	$12\frac{9}{10}$ $4\frac{1}{4}$	$45\frac{4}{15}$ $28\frac{1}{12}$	$65\frac{13}{15}$ $27\frac{7}{10}$
$26\frac{9}{10}$ $24\frac{3}{10}$	$47\frac{11}{16}$ $16\frac{7}{16}$	$73\frac{11}{16}$ $26\frac{2}{5}$	$8\frac{3}{5}$ $2\frac{1}{2}$	$74\frac{7}{16}$ $19\frac{2}{5}$	$36\frac{9}{10}$ $18\frac{7}{8}$	$8\frac{9}{10}$ $5\frac{1}{6}$	$60\frac{8}{15}$ $35\frac{1}{12}$
$45\frac{7}{12}$ $44\frac{5}{12}$	$12\frac{7}{10}$ $6\frac{1}{10}$	$47\frac{14}{15}$ $42\frac{1}{3}$	$7\frac{5}{6}$ $7\frac{2}{5}$	$42\frac{15}{16}$ $19\frac{4}{5}$	$47\frac{7}{15}$ $22\frac{1}{10}$	$12\frac{9}{10}$ $3\frac{5}{6}$	$15\frac{11}{15}$ $6\frac{1}{12}$
$96\frac{11}{12}$ $42\frac{1}{12}$	$35\frac{9}{10}$ $26\frac{7}{10}$	$78\frac{7}{12}$ $49\frac{1}{3}$	$27\frac{5}{8}$ $18\frac{2}{5}$	$8\frac{5}{8}$ $7\frac{3}{4}$	$40\frac{5}{16}$ $29\frac{1}{10}$	$42\frac{7}{15}$ $8\frac{1}{6}$	$79\frac{13}{15}$ $58\frac{1}{12}$

SUBTRACTION TYPE XI

Involving Use of Mixed Numbers

Involves borrowing. Mixed number from integer

8	25	76	46	46	98	56	78
$4\frac{1}{2}$	$4\frac{2}{5}$	$42\frac{7}{8}$	$38\frac{5}{12}$	$38\frac{5}{16}$	$78\frac{1}{3}$	$35\frac{5}{8}$	$48\frac{1}{8}$
5	99	89	97	42	85	46	75
$2\frac{1}{3}$	$57\frac{4}{5}$	$27\frac{3}{10}$	$84\frac{7}{12}$	$28\frac{7}{16}$	$46\frac{1}{4}$	$34\frac{3}{8}$	$60\frac{3}{10}$
8	56	49	94	49	79	97	84
$3\frac{2}{3}$	$24\frac{5}{6}$	$35\frac{7}{10}$	$79\frac{11}{12}$	$35\frac{9}{16}$	$32\frac{3}{4}$	$79\frac{1}{8}$	$46\frac{7}{10}$
7	88	68	46	92	96	66	45
$4\frac{1}{4}$	$46\frac{3}{8}$	$42\frac{9}{10}$	$42\frac{1}{16}$	$76\frac{11}{16}$	$27\frac{4}{5}$	$58\frac{7}{8}$	$27\frac{5}{12}$
16	77	75	30	86	75	72	75
$5\frac{3}{4}$	$35\frac{5}{8}$	$36\frac{1}{12}$	$16\frac{3}{16}$	$72\frac{1}{2}$	$42\frac{5}{6}$	$42\frac{4}{5}$	$22\frac{15}{16}$

SUBTRACTION TYPE XII

Involving Use of Mixed Numbers

Involves borrowing. Fraction from mixed number

$4\frac{1}{2}$	$42\frac{1}{5}$	$8\frac{2}{5}$	$47\frac{1}{5}$	$47\frac{1}{5}$	$12\frac{1}{6}$	$29\frac{1}{6}$	$4\frac{1}{6}$
$\frac{3}{4}$	$\frac{9}{10}$	$\frac{9}{10}$	$\frac{13}{15}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{3}{10}$	$\frac{13}{15}$
$6\frac{2}{3}$	$43\frac{1}{4}$	$35\frac{1}{6}$	$9\frac{1}{2}$	$20\frac{2}{3}$	$28\frac{1}{8}$	$90\frac{3}{8}$	$13\frac{5}{6}$
$\frac{5}{6}$	$\frac{7}{12}$	$\frac{5}{12}$	$\frac{2}{3}$	$\frac{7}{8}$	$\frac{3}{10}$	$\frac{11}{12}$	$\frac{14}{15}$
$8\frac{1}{4}$	$16\frac{1}{8}$	$40\frac{2}{3}$	$8\frac{2}{3}$	$73\frac{1}{3}$	$46\frac{1}{4}$	$41\frac{1}{10}$	$46\frac{1}{10}$
$\frac{3}{8}$	$\frac{9}{16}$	$\frac{11}{12}$	$\frac{3}{4}$	$\frac{9}{10}$	$\frac{7}{10}$	$\frac{7}{16}$	$\frac{14}{15}$
$42\frac{1}{2}$	$7\frac{1}{3}$	$72\frac{1}{3}$	$16\frac{2}{5}$	$46\frac{1}{3}$	$78\frac{5}{8}$	$1\frac{1}{6}$	$87\frac{1}{12}$
$\frac{7}{8}$	$\frac{5}{6}$	$\frac{7}{12}$	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{9}{10}$	$\frac{3}{10}$	$\frac{2}{15}$
$76\frac{1}{4}$	$9\frac{1}{5}$	$46\frac{1}{6}$	$26\frac{1}{3}$	$8\frac{1}{6}$	$20\frac{1}{8}$	$8\frac{1}{6}$	$90\frac{5}{12}$
$\frac{7}{8}$	$\frac{7}{10}$	$\frac{11}{12}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{11}{12}$	$\frac{9}{10}$	$\frac{13}{15}$

SUBTRACTION TYPE XIII

Involving Use of Mixed Numbers

Involves borrowing. Mixed number from mixed number

$8\frac{1}{4}$	$96\frac{1}{2}$	$8\frac{2}{5}$	$77\frac{3}{4}$	$98\frac{1}{6}$	$8\frac{5}{6}$	$97\frac{3}{10}$	$96\frac{1}{6}$
$4\frac{5}{8}$	$47\frac{9}{16}$	$7\frac{9}{10}$	$47\frac{11}{12}$	$47\frac{3}{5}$	$3\frac{13}{15}$	$27\frac{5}{16}$	$42\frac{4}{15}$

$9\frac{3}{5}$	$49\frac{1}{4}$	$46\frac{1}{4}$	$18\frac{1}{3}$	$60\frac{3}{8}$	$12\frac{1}{8}$	$78\frac{5}{6}$	$78\frac{1}{10}$
$2\frac{7}{10}$	$48\frac{1}{2}$	$32\frac{5}{12}$	$9\frac{1}{2}$	$48\frac{4}{5}$	$7\frac{7}{10}$	$47\frac{15}{16}$	$25\frac{4}{5}$

$12\frac{1}{2}$	$40\frac{1}{8}$	$86\frac{3}{5}$	$46\frac{2}{5}$	$25\frac{3}{16}$	$41\frac{3}{8}$	$8\frac{1}{6}$	$46\frac{1}{12}$
$11\frac{7}{12}$	$28\frac{1}{2}$	$21\frac{14}{15}$	$24\frac{2}{3}$	$17\frac{4}{5}$	$40\frac{9}{10}$	$5\frac{3}{10}$	$25\frac{2}{15}$

$65\frac{1}{5}$	$9\frac{1}{6}$	$96\frac{1}{12}$	$38\frac{3}{8}$	$20\frac{5}{12}$	$98\frac{1}{8}$	$7\frac{1}{6}$	$47\frac{1}{12}$
$46\frac{4}{15}$	$5\frac{1}{2}$	$67\frac{1}{4}$	$27\frac{4}{5}$	$10\frac{3}{5}$	$47\frac{7}{12}$	$3\frac{7}{10}$	$38\frac{8}{15}$

$84\frac{2}{5}$	$10\frac{1}{10}$	$46\frac{2}{3}$	$46\frac{1}{8}$	$9\frac{5}{8}$	$46\frac{1}{10}$	$8\frac{5}{6}$	$82\frac{5}{12}$
$32\frac{7}{15}$	$4\frac{1}{2}$	$15\frac{11}{12}$	$44\frac{2}{3}$	$5\frac{11}{12}$	$14\frac{7}{12}$	$4\frac{9}{10}$	$75\frac{7}{15}$

MULTIPLICATION

There are eleven distinct types in multiplication of fractions. In general the selection has been based on the grades of difficulty which should be recognized. The first eight types involve small numbers only, while types IX to XI involve large numbers. Type XI is included, but is intended for use in Grade VIII *only*.

In all cases the examples are so constructed that the multiplier is written first. The sign should, therefore, be read *times*. The use of the word *of* when the multiplier is a fraction is optional.

The same plan adopted in addition and subtraction is used in this process. The analysis with illustrations is given on pages 23 and 24, followed by a number of examples under each type for practice material.

TYPES IN MULTIPLICATION OF FRACTIONS

Type I.— Multiplication of an integer by a fraction

Involves small numbers

$$\text{Example: } \frac{2}{3} \times 5 = \frac{10}{3} = 3\frac{1}{3}$$

Type II.— Multiplication of an integer by a mixed number

Involves small numbers

$$\text{Example: } 3\frac{3}{4} \times 7 = \frac{15}{4} \times 7 = \frac{105}{4} = 26\frac{1}{4}$$

Type III.— Multiplication of a fraction by an integer

Involves small numbers

$$\text{Example: } 3 \times \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2}$$

Type IV.— Multiplication of a fraction by a fraction

Involves small numbers

$$\text{Example: } \frac{3}{4} \times \frac{5}{8} = \frac{15}{32}$$

Type V.— Multiplication of a fraction by a mixed number

Involves small numbers

$$\text{Example: } 2\frac{1}{2} \times \frac{1}{3} = \frac{5}{2} \times \frac{1}{3} = \frac{5}{6}$$

Type VI.— Multiplication of a mixed number by an integer

Involves small numbers

$$\text{Example: } 8 \times 3\frac{1}{3} = 8 \times \frac{10}{3} = \frac{80}{3} = 26\frac{2}{3}$$

Type VII.— Multiplication of a mixed number by a fraction

Involves small numbers

$$\text{Example: } \frac{3}{8} \times 2\frac{1}{2} = \frac{3}{8} \times \frac{5}{2} = \frac{15}{16}$$

Type VIII.— Multiplication of a mixed number by a mixed number

Involves small numbers

$$\text{Example: } 2\frac{1}{5} \times 3\frac{1}{2} = \frac{11}{5} \times \frac{7}{2} = \frac{77}{10} = 7\frac{7}{10}$$

Type IX.— Multiplication of a mixed number by an integer

Involves large numbers

$$\begin{array}{r} \text{Example: } 246\frac{2}{5} \\ \times 6 \\ \hline 5)12 \\ \underline{2\frac{2}{5}} \\ 1476 \\ \hline 1478\frac{2}{5} \end{array}$$

Type X.— Multiplication of an integer by a mixed number

Involves large numbers

$$\begin{array}{r} \text{Example: } 275 \\ \times 8\frac{3}{4} \\ \hline 4)825 \\ \underline{206\frac{1}{4}} \\ 2200 \\ \hline 2406\frac{1}{4} \end{array}$$

MULTIPLICATION TYPE I

Multiplication of an Integer by a Fraction

Involves small numbers

$\frac{1}{7} \times 5 =$	$\frac{3}{4} \times 12 =$	$\frac{3}{4} \times 7 =$	$\frac{7}{10} \times 5 =$
$\frac{1}{9} \times 7 =$	$\frac{4}{5} \times 15 =$	$\frac{7}{9} \times 8 =$	$\frac{3}{4} \times 6 =$
$\frac{2}{5} \times 2 =$	$\frac{6}{7} \times 14 =$	$\frac{5}{6} \times 7 =$	$\frac{5}{6} \times 9 =$
$\frac{3}{11} \times 3 =$	$\frac{2}{3} \times 9 =$	$\frac{3}{8} \times 9 =$	$\frac{3}{10} \times 8 =$
$\frac{1}{5} \times 3 =$	$\frac{3}{7} \times 21 =$	$\frac{3}{7} \times 9 =$	$\frac{7}{8} \times 12 =$
$\frac{1}{15} \times 4 =$	$\frac{2}{5} \times 10 =$	$\frac{1}{5} \times 12 =$	$\frac{3}{8} \times 10 =$
$\frac{2}{11} \times 4 =$	$\frac{1}{6} \times 12 =$	$\frac{1}{5} \times 16 =$	$\frac{2}{9} \times 6 =$
$\frac{1}{5} \times 3 =$	$\frac{3}{8} \times 24 =$	$\frac{3}{5} \times 9 =$	$\frac{7}{8} \times 14 =$
$\frac{1}{4} \times 3 =$	$\frac{5}{7} \times 35 =$	$\frac{2}{3} \times 8 =$	$\frac{1}{9} \times 15 =$
$\frac{2}{7} \times 3 =$	$\frac{2}{9} \times 9 =$	$\frac{3}{4} \times 7 =$	$\frac{7}{12} \times 9 =$

MULTIPLICATION TYPE II

Multiplication of an Integer by a Mixed Number

Involves small numbers

$2\frac{1}{2} \times 4 =$	$3\frac{3}{4} \times 5 =$	$2\frac{5}{6} \times 3 =$
$3\frac{1}{3} \times 6 =$	$2\frac{1}{3} \times 4 =$	$3\frac{5}{8} \times 4 =$
$4\frac{2}{5} \times 5 =$	$3\frac{5}{6} \times 7 =$	$2\frac{5}{8} \times 6 =$
$3\frac{1}{4} \times 8 =$	$2\frac{3}{5} \times 8 =$	$3\frac{4}{9} \times 6 =$
$2\frac{4}{5} \times 10 =$	$2\frac{1}{4} \times 5 =$	$2\frac{3}{4} \times 2 =$
$3\frac{5}{6} \times 12 =$	$4\frac{1}{5} \times 6 =$	$5\frac{1}{6} \times 4 =$
$4\frac{1}{6} \times 5 =$	$2\frac{1}{3} \times 4 =$	$7\frac{5}{12} \times 4 =$
$4\frac{1}{5} \times 10 =$	$3\frac{1}{4} \times 5 =$	$3\frac{5}{16} \times 8 =$
$3\frac{3}{8} \times 16 =$	$4\frac{1}{2} \times 7 =$	$4\frac{7}{16} \times 10 =$
$2\frac{1}{10} \times 10 =$	$3\frac{1}{5} \times 8 =$	$5\frac{1}{6} \times 6 =$

MULTIPLICATION TYPE III

Multiplication of a Fraction by an Integer

Involves small numbers

$2 \times \frac{1}{7} =$	$12 \times \frac{1}{2} =$	$8 \times \frac{1}{3} =$	$9 \times \frac{5}{6} =$
$3 \times \frac{2}{7} =$	$21 \times \frac{2}{3} =$	$9 \times \frac{2}{5} =$	$8 \times \frac{7}{12} =$
$4 \times \frac{1}{5} =$	$36 \times \frac{3}{4} =$	$7 \times \frac{3}{8} =$	$6 \times \frac{4}{9} =$
$5 \times \frac{3}{16} =$	$32 \times \frac{1}{4} =$	$8 \times \frac{2}{3} =$	$8 \times \frac{1}{12} =$
$4 \times \frac{2}{9} =$	$35 \times \frac{2}{5} =$	$5 \times \frac{6}{7} =$	$4 \times \frac{5}{6} =$
$5 \times \frac{1}{11} =$	$24 \times \frac{3}{8} =$	$4 \times \frac{5}{9} =$	$12 \times \frac{5}{9} =$
$4 \times \frac{4}{15} =$	$54 \times \frac{5}{6} =$	$8 \times \frac{3}{7} =$	$4 \times \frac{1}{6} =$
$3 \times \frac{1}{7} =$	$45 \times \frac{4}{5} =$	$4 \times \frac{8}{11} =$	$15 \times \frac{3}{10} =$
$2 \times \frac{1}{3} =$	$27 \times \frac{2}{3} =$	$3 \times \frac{2}{5} =$	$12 \times \frac{5}{8} =$
$4 \times \frac{1}{9} =$	$44 \times \frac{3}{4} =$	$7 \times \frac{2}{3} =$	$10 \times \frac{7}{12} =$

MULTIPLICATION TYPE IV

Multiplication of a Fraction by a Fraction

Involves small numbers

$\frac{1}{2} \times \frac{3}{4} =$	$\frac{1}{3} \times \frac{6}{11} =$	$\frac{3}{4} \times \frac{8}{9} =$
$\frac{2}{3} \times \frac{2}{5} =$	$\frac{2}{3} \times \frac{3}{5} =$	$\frac{3}{5} \times \frac{5}{6} =$
$\frac{1}{2} \times \frac{5}{6} =$	$\frac{2}{3} \times \frac{5}{6} =$	$\frac{2}{5} \times \frac{5}{8} =$
$\frac{2}{3} \times \frac{4}{5} =$	$\frac{3}{4} \times \frac{7}{12} =$	$\frac{3}{5} \times \frac{5}{12} =$
$\frac{3}{4} \times \frac{1}{8} =$	$\frac{1}{5} \times \frac{5}{8} =$	$\frac{2}{7} \times \frac{7}{12} =$
$\frac{3}{5} \times \frac{2}{7} =$	$\frac{3}{5} \times \frac{1}{6} =$	$\frac{5}{9} \times \frac{9}{10} =$
$\frac{1}{6} \times \frac{7}{12} =$	$\frac{3}{8} \times \frac{4}{5} =$	$\frac{3}{8} \times \frac{4}{9} =$
$\frac{5}{6} \times \frac{1}{2} =$	$\frac{5}{6} \times \frac{8}{11} =$	$\frac{8}{9} \times \frac{9}{10} =$
$\frac{3}{8} \times \frac{3}{5} =$	$\frac{5}{7} \times \frac{7}{12} =$	$\frac{2}{3} \times \frac{9}{10} =$
$\frac{7}{8} \times \frac{7}{8} =$	$\frac{6}{7} \times \frac{3}{10} =$	$\frac{3}{4} \times \frac{8}{15} =$

MULTIPLICATION TYPE V

Multiplication of a Fraction by a Mixed Number

Involves small numbers

$$\begin{array}{llll}
6\frac{1}{2} \times \frac{1}{3} = & 1\frac{7}{8} \times \frac{5}{8} = & 2\frac{1}{2} \times \frac{7}{10} = & 3\frac{1}{3} \times \frac{3}{8} = \\
8\frac{1}{2} \times \frac{1}{4} = & 1\frac{5}{9} \times \frac{4}{5} = & 7\frac{1}{2} \times \frac{5}{9} = & 7\frac{1}{3} \times \frac{6}{11} = \\
6\frac{3}{4} \times \frac{3}{8} = & 3\frac{3}{10} \times \frac{3}{7} = & 17\frac{1}{2} \times \frac{5}{7} = & 5\frac{1}{4} \times \frac{2}{3} = \\
4\frac{1}{5} \times \frac{3}{4} = & 12\frac{1}{2} \times \frac{3}{4} = & 6\frac{1}{4} \times \frac{7}{10} = & 19\frac{1}{5} \times \frac{5}{8} = \\
5\frac{2}{5} \times \frac{4}{5} = & 6\frac{2}{3} \times \frac{4}{9} = & 4\frac{1}{5} \times \frac{6}{7} = & 8\frac{1}{6} \times \frac{3}{7} = \\
4\frac{1}{6} \times \frac{1}{4} = & 6\frac{1}{4} \times \frac{3}{4} = & 1\frac{2}{5} \times \frac{1}{7} = & 5\frac{5}{6} \times \frac{3}{5} = \\
2\frac{1}{7} \times \frac{1}{2} = & 2\frac{1}{3} \times \frac{5}{16} = & 12\frac{3}{5} \times \frac{4}{9} = & 9\frac{5}{8} \times \frac{4}{7} = \\
1\frac{2}{7} \times \frac{3}{4} = & 4\frac{1}{5} \times \frac{1}{2} = & 5\frac{5}{7} \times \frac{5}{16} = & 4\frac{7}{8} \times \frac{2}{3} = \\
3\frac{1}{8} \times \frac{3}{4} = & 2\frac{3}{5} \times \frac{2}{3} = & 4\frac{3}{8} \times \frac{4}{5} = & 2\frac{7}{9} \times \frac{3}{5} = \\
3\frac{3}{8} \times \frac{5}{8} = & 5\frac{3}{4} \times \frac{5}{8} = & 4\frac{4}{5} \times \frac{4}{9} = & 5\frac{5}{9} \times \frac{3}{10} =
\end{array}$$

MULTIPLICATION TYPE VI

Multiplication of a Mixed Number by an Integer

Involves small numbers

$$\begin{array}{lll}
8 \times 4\frac{1}{4} = & 7 \times 10\frac{1}{2} = & 8 \times 3\frac{7}{10} = \\
12 \times 6\frac{2}{3} = & 4 \times 3\frac{4}{5} = & 4 \times 2\frac{5}{8} = \\
5 \times 4\frac{1}{5} = & 7 \times 5\frac{1}{6} = & 6 \times 3\frac{7}{8} = \\
6 \times 2\frac{1}{3} = & 4 \times 4\frac{1}{3} = & 8 \times 2\frac{5}{12} = \\
8 \times 4\frac{1}{4} = & 9 \times 5\frac{1}{8} = & 3 \times 2\frac{5}{6} = \\
9 \times 3\frac{1}{2} = & 3 \times 4\frac{1}{4} = & 4 \times 3\frac{3}{10} = \\
10 \times 7\frac{1}{2} = & 7 \times 2\frac{1}{3} = & 2 \times 5\frac{5}{12} = \\
8 \times 3\frac{1}{4} = & 2 \times 4\frac{1}{9} = & 6 \times 4\frac{3}{8} = \\
12 \times 2\frac{1}{3} = & 3 \times 2\frac{1}{16} = & 5 \times 2\frac{2}{15} = \\
4 \times 5\frac{1}{2} = & 5 \times 3\frac{1}{16} = & 8 \times 3\frac{1}{16} =
\end{array}$$

MULTIPLICATION TYPE VII

Multiplication of a Mixed Number by a Fraction

Involves small numbers

$$\begin{array}{llll}
\frac{2}{3} \times 3\frac{2}{5} = & \frac{2}{9} \times 4\frac{1}{3} = & \frac{1}{7} \times 3\frac{8}{9} = & \frac{9}{10} \times 5\frac{5}{9} = \\
\frac{1}{2} \times 5\frac{1}{4} = & \frac{7}{9} \times 2\frac{1}{2} = & \frac{1}{2} \times 8\frac{2}{9} = & \frac{3}{7} \times 5\frac{4}{9} = \\
\frac{1}{4} \times 4\frac{1}{6} = & \frac{1}{10} \times 3\frac{1}{4} = & \frac{1}{3} \times 2\frac{5}{8} = & \frac{3}{4} \times 7\frac{1}{9} = \\
\frac{3}{4} \times 3\frac{2}{5} = & \frac{1}{10} \times 2\frac{3}{5} = & \frac{5}{9} \times 7\frac{5}{7} = & \frac{2}{11} \times 12\frac{3}{8} = \\
\frac{3}{5} \times 4\frac{1}{2} = & \frac{1}{3} \times 4\frac{3}{8} = & \frac{9}{10} \times 8\frac{4}{7} = & \frac{9}{10} \times 14\frac{1}{6} = \\
\frac{1}{6} \times 5\frac{1}{2} = & \frac{1}{4} \times 6\frac{1}{3} = & \frac{7}{12} \times 16\frac{4}{15} = & \frac{5}{16} \times 4\frac{4}{5} = \\
\frac{5}{6} \times 3\frac{2}{3} = & \frac{4}{5} \times 2\frac{1}{3} = & \frac{3}{16} \times 4\frac{4}{5} = & \frac{4}{9} \times 11\frac{1}{2} = \\
\frac{1}{8} \times 4\frac{1}{2} = & \frac{5}{8} \times 1\frac{1}{2} = & \frac{5}{12} \times 3\frac{3}{8} = & \frac{5}{16} \times 4\frac{4}{5} = \\
\frac{3}{8} \times 5\frac{1}{2} = & \frac{3}{5} \times 2\frac{1}{4} = & \frac{5}{16} \times 13\frac{1}{3} = & \frac{9}{10} \times 4\frac{1}{6} = \\
\frac{5}{8} \times 4\frac{1}{3} = & \frac{2}{3} \times 3\frac{3}{5} = & \frac{3}{4} \times 2\frac{2}{3} = &
\end{array}$$

MULTIPLICATION TYPE VIII

Multiplication of a Mixed Number by a Mixed Number

Involves small numbers

$$\begin{array}{llll}
2\frac{1}{2} \times 2\frac{1}{3} = & 1\frac{1}{2} \times 2\frac{2}{3} = & 3\frac{3}{4} \times 1\frac{1}{5} = & 3\frac{3}{5} \times 2\frac{2}{9} = \\
3\frac{1}{2} \times 3\frac{1}{4} = & 4\frac{1}{2} \times 2\frac{1}{6} = & 2\frac{3}{4} \times 7\frac{3}{11} = & 8\frac{4}{5} \times 2\frac{3}{11} = \\
2\frac{2}{3} \times 2\frac{2}{3} = & 12\frac{1}{2} \times 4\frac{4}{5} = & 6\frac{3}{4} \times 3\frac{2}{3} = & 4\frac{1}{6} \times 10\frac{4}{5} = \\
3\frac{1}{3} \times 2\frac{2}{7} = & 3\frac{1}{3} \times 2\frac{7}{10} = & 3\frac{1}{5} \times 7\frac{1}{2} = & 8\frac{1}{6} \times 5\frac{3}{7} = \\
4\frac{1}{2} \times 2\frac{1}{4} = & 5\frac{1}{3} \times 1\frac{1}{8} = & 7\frac{1}{5} \times 2\frac{1}{12} = & 1\frac{5}{6} \times 1\frac{5}{7} = \\
4\frac{1}{4} \times 3\frac{2}{3} = & 9\frac{1}{3} \times 3\frac{3}{7} = & 1\frac{2}{5} \times 6\frac{3}{7} = & 5\frac{5}{6} \times 6\frac{3}{5} = \\
2\frac{3}{4} \times 4\frac{1}{2} = & 1\frac{2}{3} \times 8\frac{1}{4} = & 6\frac{2}{5} \times 3\frac{1}{8} = & 1\frac{2}{7} \times 11\frac{2}{3} = \\
5\frac{1}{3} \times 2\frac{2}{3} = & 6\frac{2}{3} \times 8\frac{7}{10} = & 8\frac{2}{5} \times 1\frac{1}{6} = & 1\frac{3}{7} \times 2\frac{1}{2} = \\
4\frac{3}{8} \times 3\frac{1}{6} = & 2\frac{2}{3} \times 3\frac{3}{8} = & 9\frac{3}{5} \times 4\frac{3}{8} = & 4\frac{1}{8} \times 6\frac{2}{9} = \\
5\frac{2}{5} \times 4\frac{1}{2} = & 2\frac{1}{4} \times 4\frac{2}{3} = & 1\frac{3}{5} \times 8\frac{1}{3} = & 1\frac{3}{8} \times 2\frac{2}{5} =
\end{array}$$

MULTIPLICATION TYPE IX

Multiplication of a Mixed Number by an Integer

Involves large numbers

$$\begin{array}{lll}
4 \times 246\frac{1}{5} = & 5 \times 246\frac{1}{5} = & 6 \times 573\frac{4}{5} = \\
46 \times 246\frac{1}{3} = & 2 \times 456\frac{1}{3} = & 9 \times 448\frac{2}{3} = \\
7 \times 706\frac{3}{8} = & 38 \times 172\frac{3}{5} = & 3 \times 249\frac{2}{7} = \\
8 \times 572\frac{3}{8} = & 8 \times 342\frac{1}{5} = & 126 \times 142\frac{5}{6} = \\
3 \times 379\frac{1}{4} = & 5 \times 426\frac{4}{5} = & 8 \times 372\frac{5}{6} = \\
243 \times 346\frac{4}{5} = & 4 \times 472\frac{1}{6} = & 7 \times 247\frac{1}{7} = \\
7 \times 426\frac{1}{2} = & 367 \times 172\frac{1}{2} = & 4 \times 297\frac{1}{8} = \\
4 \times 427\frac{1}{2} = & 9 \times 442\frac{4}{7} = & 178 \times 342\frac{5}{8} = \\
5 \times 646\frac{1}{6} = & 3 \times 326\frac{2}{3} = & 6 \times 326\frac{3}{8} = \\
472 \times 427\frac{3}{8} = & 2 \times 427\frac{2}{5} = & 8 \times 432\frac{3}{4} = \\
8 \times 426\frac{7}{10} = & 342 \times 463\frac{2}{7} = & 5 \times 243\frac{3}{16} = \\
6 \times 226\frac{5}{6} = & 7 \times 272\frac{3}{16} = & 78 \times 246\frac{3}{4} = \\
8 \times 172\frac{1}{16} = & 10 \times 372\frac{3}{10} = & 8 \times 172\frac{5}{8} = \\
46 \times 172\frac{3}{8} = & &
\end{array}$$

MULTIPLICATION TYPE X

Multiplication of an Integer by a Mixed Number

Involves large numbers

$$\begin{array}{lll}
8\frac{3}{4} \times 275 = & 4\frac{3}{7} \times 469 = & 7\frac{3}{4} \times 784 = \\
46\frac{3}{4} \times 342 = & 5\frac{1}{5} \times 189 = & 3\frac{1}{2} \times 541 = \\
5\frac{1}{5} \times 696 = & 72\frac{1}{9} \times 842 = & 9\frac{3}{5} \times 835 = \\
7\frac{3}{4} \times 592 = & 4\frac{4}{5} \times 972 = & 45\frac{1}{10} \times 472 = \\
7\frac{2}{3} \times 341 = & 4\frac{2}{7} \times 703 = & 3\frac{1}{6} \times 396 = \\
72\frac{3}{10} \times 784 = & 8\frac{1}{5} \times 956 = & 3\frac{3}{5} \times 446 = \\
4\frac{5}{6} \times 246 = & 59\frac{3}{10} \times 426 = & 4\frac{1}{4} \times 812 = \\
4\frac{1}{6} \times 247 = & 3\frac{1}{7} \times 247 = & 15\frac{4}{5} \times 562 = \\
6\frac{2}{3} \times 318 = & 4\frac{1}{2} \times 346 = & 4\frac{3}{7} \times 372 = \\
48\frac{3}{5} \times 846 = & 8\frac{1}{6} \times 348 = & 7\frac{1}{3} \times 586 = \\
2\frac{3}{8} \times 798 = & 28\frac{5}{8} \times 749 = & 8\frac{4}{9} \times 843 = \\
9\frac{2}{3} \times 387 = & 4\frac{5}{8} \times 462 = & 22\frac{7}{8} \times 364 = \\
9\frac{1}{2} \times 672 = & 4\frac{1}{4} \times 467 = & 5\frac{7}{8} \times 762 = \\
52\frac{6}{7} \times 643 = & &
\end{array}$$

MULTIPLICATION TYPE XI

Multiplication of a Mixed Number by a Mixed Number

Involves large numbers

$32\frac{1}{3} \times 69\frac{1}{2} =$	$29\frac{3}{4} \times 28\frac{1}{8} =$	$43\frac{2}{3} \times 28\frac{3}{5} =$
$48\frac{1}{4} \times 32\frac{1}{3} =$	$63\frac{3}{5} \times 75\frac{1}{4} =$	$32\frac{3}{4} \times 57\frac{2}{3} =$
$72\frac{1}{5} \times 25\frac{1}{6} =$	$72\frac{1}{8} \times 42\frac{3}{4} =$	$69\frac{2}{7} \times 40\frac{3}{4} =$
$42\frac{1}{8} \times 48\frac{1}{7} =$	$28\frac{4}{5} \times 35\frac{1}{9} =$	$63\frac{2}{5} \times 29\frac{5}{8} =$
$50\frac{1}{4} \times 48\frac{1}{10} =$	$43\frac{3}{4} \times 56\frac{1}{5} =$	$75\frac{3}{5} \times 28\frac{3}{8} =$
$36\frac{1}{5} \times 42\frac{1}{8} =$	$44\frac{1}{3} \times 46\frac{3}{4} =$	$48\frac{5}{6} \times 39\frac{3}{10} =$
$73\frac{1}{4} \times 43\frac{1}{5} =$	$27\frac{1}{8} \times 25\frac{4}{9} =$	$42\frac{3}{8} \times 42\frac{2}{5} =$
$76\frac{1}{3} \times 41\frac{1}{5} =$	$48\frac{1}{5} \times 72\frac{5}{8} =$	$84\frac{5}{8} \times 46\frac{3}{5} =$
$42\frac{1}{9} \times 46\frac{1}{8} =$	$45\frac{1}{3} \times 43\frac{2}{3} =$	$79\frac{2}{9} \times 16\frac{3}{4} =$
$26\frac{1}{8} \times 27\frac{1}{4} =$	$46\frac{4}{5} \times 75\frac{1}{3} =$	$81\frac{2}{3} \times 25\frac{2}{3} =$

DIVISION

There are ten distinct types in division of fractions. In general the selection has been based on the grades of difficulty which should be recognized. The first eight types involve only small numbers, while types IX and X involve large numbers. The last two types are included, but are intended for use in Grade VIII *only*.

The plan adopted in this bulletin is continued in this process. The analysis with illustrations is given on this page, followed by a number of examples under each type for practice material.

TYPES IN DIVISION OF FRACTIONS

Type I.— Division of a fraction by an integer

Involves small numbers

$$\text{Example: } \frac{1}{2} \div 3 = \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$$

Type II.— Division of a mixed number by an integer

Involves small numbers

$$\text{Example: } 2\frac{1}{2} \div 2 = \frac{5}{2} \times \frac{1}{2} = \frac{5}{4} = 1\frac{1}{4}$$

Type III.— Division of an integer by a fraction

Involves small numbers

$$\text{Example: } 8 \div \frac{1}{3} = 8 \times \frac{3}{1} = 24$$

Type IV.— Division of a fraction by a fraction

Involves small numbers

$$\text{Example: } \frac{1}{3} \div \frac{1}{2} = \frac{1}{3} \times \frac{2}{1} = \frac{2}{3}$$

Type V.— Division of a mixed number by a fraction

Involves small numbers

$$\text{Example: } 5\frac{1}{3} \div \frac{1}{2} = \frac{16}{3} \times \frac{2}{1} = \frac{32}{3} = 10\frac{2}{3}$$

Type VI.— Division of an integer by a mixed number

Involves small numbers

$$\text{Example: } 44 \div 1\frac{1}{2} = 44 \times \frac{2}{3} = \frac{88}{3} = 29\frac{1}{3}$$

Type VII.— Division of a fraction by a mixed number

Involves small numbers

$$\text{Example: } \frac{1}{3} \div 1\frac{1}{2} = \frac{1}{3} \times \frac{2}{3} = \frac{2}{9}$$

Type VIII.— Division of a mixed number by a mixed number

Involves small numbers

$$\text{Example: } 3\frac{1}{2} \div 1\frac{1}{3} = \frac{7}{2} \times \frac{3}{4} = \frac{21}{8} = 2\frac{5}{8}$$

Type IX.— Division of a mixed number by an integer

Involves large numbers

$$\text{Example: } 5367\frac{1}{3} \div 5$$

Type X.— Division of an integer by a mixed number

Involves large numbers

$$\text{Example: } 2467 \div 8\frac{1}{4}$$

DIVISION TYPE I

Division of a Fraction by an Integer

Involves small numbers

$$\begin{array}{llll}
\frac{1}{2} \div 3 = & \frac{4}{9} \div 2 = & \frac{2}{5} \div 4 = & \frac{3}{8} \div 9 = \\
\frac{1}{3} \div 5 = & \frac{9}{16} \div 3 = & \frac{3}{8} \div 6 = & \frac{4}{7} \div 2 = \\
\frac{3}{4} \div 7 = & \frac{4}{5} \div 2 = & \frac{5}{12} \div 10 = & \frac{7}{8} \div 4 = \\
\frac{2}{3} \div 9 = & \frac{8}{9} \div 4 = & \frac{3}{5} \div 9 = & \frac{3}{10} \div 4 = \\
\frac{5}{8} \div 6 = & \frac{9}{10} \div 3 = & \frac{2}{3} \div 8 = & \frac{8}{9} \div 4 = \\
\frac{7}{8} \div 5 = & \frac{8}{11} \div 2 = & \frac{4}{5} \div 8 = & \frac{7}{10} \div 6 = \\
\frac{3}{10} \div 7 = & \frac{6}{11} \div 3 = & \frac{2}{5} \div 6 = & \frac{4}{11} \div 2 = \\
\frac{7}{10} \div 3 = & \frac{12}{13} \div 4 = & \frac{3}{5} \div 12 = & \frac{5}{16} \div 2 = \\
\frac{5}{16} \div 3 = & \frac{12}{13} \div 6 = & \frac{2}{9} \div 10 = & \frac{11}{16} \div 4 = \\
\frac{11}{16} \div 5 = & \frac{9}{11} \div 3 = & \frac{5}{8} \div 15 = & \frac{3}{8} \div 6 =
\end{array}$$

DIVISION TYPE II

Division of a Mixed Number by an Integer

Involves small numbers

$$\begin{array}{llll}
2\frac{1}{2} \div 2 = & 7\frac{1}{2} \div 3 = & 1\frac{1}{2} \div 2 = & 1\frac{1}{8} \div 2 = \\
12\frac{1}{2} \div 2 = & 13\frac{1}{5} \div 3 = & 1\frac{1}{4} \div 2 = & 2\frac{2}{3} \div 8 = \\
8\frac{1}{3} \div 3 = & 11\frac{3}{5} \div 2 = & 1\frac{2}{3} \div 3 = & 1\frac{1}{2} \div 6 = \\
6\frac{1}{2} \div 6 = & 8\frac{2}{3} \div 4 = & 2\frac{2}{3} \div 3 = & 3\frac{1}{2} \div 7 = \\
6\frac{7}{8} \div 4 = & 9\frac{1}{7} \div 4 = & 2\frac{2}{3} \div 4 = & 4\frac{2}{3} \div 6 = \\
7\frac{1}{3} \div 6 = & 6\frac{2}{3} \div 5 = & 5\frac{1}{8} \div 6 = & 4\frac{1}{2} \div 6 = \\
9\frac{3}{4} \div 8 = & 33\frac{1}{3} \div 12 = & 3\frac{1}{2} \div 3 = & 5\frac{3}{5} \div 7 = \\
37\frac{1}{2} \div 8 = & 7\frac{1}{3} \div 6 = & 4\frac{2}{3} \div 5 = & 3\frac{1}{3} \div 5 = \\
3\frac{1}{2} \div 2 = & 9\frac{1}{3} \div 7 = & 7\frac{1}{8} \div 2 = & 2\frac{5}{8} \div 3 = \\
5\frac{3}{8} \div 2 = & 16\frac{1}{2} \div 12 = & 6\frac{1}{3} \div 4 = & 6\frac{2}{3} \div 10 =
\end{array}$$

DIVISION TYPE III

Division of an Integer by a Fraction

Involves small numbers

$8 \div \frac{1}{3} =$	$12 \div \frac{3}{5} =$	$8 \div \frac{3}{5} =$	$4 \div \frac{3}{4} =$
$6 \div \frac{2}{3} =$	$15 \div \frac{5}{8} =$	$9 \div \frac{2}{3} =$	$5 \div \frac{2}{5} =$
$8 \div \frac{4}{5} =$	$14 \div \frac{2}{3} =$	$10 \div \frac{3}{8} =$	$7 \div \frac{2}{3} =$
$12 \div \frac{3}{7} =$	$4 \div \frac{4}{5} =$	$8 \div \frac{3}{16} =$	$8 \div \frac{3}{4} =$
$16 \div \frac{2}{5} =$	$9 \div \frac{3}{16} =$	$5 \div \frac{7}{16} =$	$6 \div \frac{5}{8} =$

DIVISION TYPE IV

Division of a Fraction by a Fraction

Involves small numbers

$\frac{1}{2} \div \frac{1}{2} =$	$\frac{1}{2} \div \frac{1}{5} =$	$\frac{1}{2} \div \frac{3}{4} =$	$\frac{3}{4} \div \frac{3}{8} =$
$\frac{1}{2} \div \frac{1}{4} =$	$\frac{1}{2} \div \frac{3}{5} =$	$\frac{1}{2} \div \frac{7}{8} =$	$\frac{4}{5} \div \frac{8}{15} =$
$\frac{1}{3} \div \frac{1}{6} =$	$\frac{4}{5} \div \frac{1}{2} =$	$\frac{2}{3} \div \frac{2}{5} =$	$\frac{2}{7} \div \frac{6}{7} =$
$\frac{1}{5} \div \frac{1}{15} =$	$\frac{4}{7} \div \frac{1}{2} =$	$\frac{1}{3} \div \frac{11}{12} =$	$\frac{4}{7} \div \frac{6}{7} =$
$\frac{3}{5} \div \frac{3}{10} =$	$\frac{5}{9} \div \frac{1}{2} =$	$\frac{3}{4} \div \frac{5}{8} =$	$\frac{5}{8} \div \frac{4}{15} =$
$\frac{5}{6} \div \frac{1}{12} =$	$\frac{2}{3} \div \frac{3}{7} =$	$\frac{1}{4} \div \frac{5}{12} =$	$\frac{3}{5} \div \frac{9}{10} =$
$\frac{3}{4} \div \frac{3}{8} =$	$\frac{3}{4} \div \frac{1}{5} =$	$\frac{3}{4} \div \frac{7}{10} =$	$\frac{9}{10} \div \frac{3}{5} =$
$\frac{1}{2} \div \frac{1}{3} =$	$\frac{5}{8} \div \frac{3}{5} =$	$\frac{3}{4} \div \frac{6}{7} =$	$\frac{5}{6} \div \frac{15}{16} =$
$\frac{1}{2} \div \frac{2}{3} =$	$\frac{2}{3} \div \frac{3}{4} =$	$\frac{9}{10} \div \frac{3}{4} =$	$\frac{3}{4} \div \frac{9}{10} =$
$\frac{2}{3} \div \frac{1}{2} =$	$\frac{5}{8} \div \frac{3}{16} =$	$\frac{6}{7} \div \frac{5}{8} =$	$\frac{7}{15} \div \frac{7}{9} =$

DIVISION TYPE V

Division of a Mixed Number by a Fraction

Involves small numbers

$5\frac{1}{2} \div \frac{1}{2} =$	$2\frac{1}{2} \div \frac{1}{5} =$	$2\frac{1}{2} \div \frac{7}{8} =$	$6\frac{1}{4} \div \frac{2}{9} =$
$37\frac{1}{2} \div \frac{1}{2} =$	$8\frac{1}{2} \div \frac{2}{5} =$	$8\frac{2}{3} \div \frac{3}{8} =$	$6\frac{3}{4} \div \frac{9}{16} =$
$4\frac{1}{8} \div \frac{3}{16} =$	$4\frac{2}{3} \div \frac{4}{5} =$	$6\frac{1}{4} \div \frac{5}{8} =$	$7\frac{1}{4} \div \frac{3}{5} =$
$5\frac{1}{3} \div \frac{2}{3} =$	$8\frac{1}{2} \div \frac{5}{6} =$	$6\frac{3}{4} \div \frac{9}{10} =$	$5\frac{3}{8} \div \frac{2}{3} =$
$4\frac{1}{5} \div \frac{3}{5} =$	$7\frac{1}{4} \div \frac{1}{6} =$	$6\frac{2}{3} \div \frac{5}{12} =$	$4\frac{1}{6} \div \frac{3}{4} =$

DIVISION TYPE VI

Division of an Integer by a Mixed Number

Involves small numbers

$44 \div 1\frac{1}{2} =$	$9 \div 1\frac{1}{2} =$	$1 \div 3\frac{1}{3} =$
$8 \div 3\frac{1}{2} =$	$12 \div 1\frac{1}{2} =$	$2 \div 2\frac{2}{3} =$
$9 \div 1\frac{1}{3} =$	$10 \div 2\frac{1}{2} =$	$3 \div 4\frac{1}{2} =$
$12 \div 4\frac{1}{3} =$	$4 \div 1\frac{1}{3} =$	$5 \div 6\frac{2}{3} =$
$4 \div 2\frac{3}{5} =$	$28 \div 5\frac{1}{3} =$	$4 \div 4\frac{1}{4} =$
$5 \div 1\frac{1}{5} =$	$21 \div 4\frac{2}{3} =$	$2 \div 3\frac{1}{3} =$
$8 \div 2\frac{2}{3} =$	$96 \div 2\frac{2}{5} =$	$7 \div 9\frac{1}{8} =$
$4 \div 2\frac{3}{4} =$	$75 \div 3\frac{1}{8} =$	$4 \div 5\frac{2}{3} =$
$9 \div 1\frac{1}{3} =$	$12 \div 4\frac{4}{5} =$	$6 \div 8\frac{1}{8} =$
$7 \div 3\frac{1}{3} =$	$3 \div 1\frac{2}{3} =$	$3 \div 4\frac{1}{2} =$

DIVISION TYPE VII

Division of a Fraction by a Mixed Number

Involves small numbers

$$\frac{1}{2} \div 1\frac{1}{2} = \quad \frac{1}{3} \div 3\frac{2}{3} = \quad \frac{3}{4} \div 5\frac{1}{2} = \quad \frac{3}{8} \div 1\frac{1}{4} =$$

$$\frac{1}{2} \div 2\frac{1}{4} = \quad \frac{2}{3} \div 4\frac{1}{3} = \quad \frac{3}{5} \div 1\frac{1}{2} = \quad \frac{5}{8} \div 1\frac{2}{3} =$$

$$\frac{1}{2} \div 4\frac{1}{2} = \quad \frac{3}{4} \div 1\frac{1}{2} = \quad \frac{4}{5} \div 2\frac{2}{3} = \quad \frac{7}{8} \div 1\frac{1}{2} =$$

$$\frac{1}{3} \div 1\frac{1}{2} = \quad \frac{1}{4} \div 2\frac{1}{4} = \quad \frac{2}{5} \div 1\frac{1}{3} = \quad \frac{3}{4} \div 3\frac{3}{4} =$$

$$\frac{2}{3} \div 2\frac{1}{4} = \quad \frac{3}{4} \div 3\frac{1}{2} = \quad \frac{5}{6} \div 1\frac{2}{3} = \quad \frac{2}{3} \div 1\frac{1}{3} =$$

DIVISION TYPE VIII

Division of a Mixed Number by a Mixed Number

Involves small numbers

$$3\frac{1}{2} \div 2\frac{1}{3} = \quad 2\frac{1}{3} \div 3\frac{1}{2} = \quad 5\frac{1}{8} \div 3\frac{1}{3} =$$

$$3\frac{1}{3} \div 5\frac{1}{3} = \quad 4\frac{1}{2} \div 1\frac{1}{2} = \quad 2\frac{2}{5} \div 1\frac{2}{3} =$$

$$6\frac{1}{2} \div 3\frac{1}{3} = \quad 9\frac{3}{4} \div 7\frac{1}{4} = \quad 4\frac{1}{5} \div 2\frac{1}{3} =$$

$$3\frac{1}{2} \div 4\frac{1}{3} = \quad 2\frac{1}{3} \div 5\frac{1}{4} = \quad 4\frac{2}{3} \div 7\frac{1}{3} =$$

$$2\frac{1}{2} \div 4\frac{1}{8} = \quad 5\frac{2}{5} \div 1\frac{1}{8} = \quad 8\frac{1}{2} \div 1\frac{1}{2} =$$

$$17\frac{1}{2} \div 3\frac{1}{2} = \quad 3\frac{1}{2} \div 2\frac{1}{2} = \quad 3\frac{1}{2} \div 2\frac{1}{3} =$$

$$2\frac{1}{4} \div 1\frac{2}{3} = \quad 5\frac{1}{8} \div 2\frac{1}{3} =$$

DIVISION TYPE IX

Division of a Mixed Number by an Integer

Involves large numbers

$5367\frac{1}{8} \div 5 =$

$3569\frac{3}{4} \div 8 =$

$6342\frac{1}{8} \div 12 =$

$6938\frac{2}{8} \div 26 =$

$2789\frac{2}{8} \div 4 =$

$2367\frac{1}{2} \div 2 =$

$3679\frac{2}{5} \div 14 =$

$5345\frac{2}{5} \div 42 =$

$3872\frac{1}{4} \div 6 =$

$3784\frac{2}{5} \div 7 =$

$5678\frac{2}{8} \div 42 =$

$3678\frac{1}{2} \div 21 =$

$5678\frac{1}{2} \div 9 =$

$5867\frac{3}{8} \div 2 =$

$5354\frac{5}{8} \div 25 =$

$5678\frac{1}{8} \div 42 =$

$3782\frac{5}{8} \div 7 =$

$6379\frac{5}{8} \div 5 =$

$6783\frac{3}{4} \div 45 =$

$5378\frac{1}{5} \div 73 =$

DIVISION TYPE X

Division of an Integer by a Mixed Number

Involves large numbers

$2467 \div 8\frac{1}{4} =$

$5862 \div 8\frac{3}{4} =$

$6752 \div 12\frac{1}{3} =$

$6793 \div 9\frac{1}{2} =$

$4467 \div 15\frac{1}{2} =$

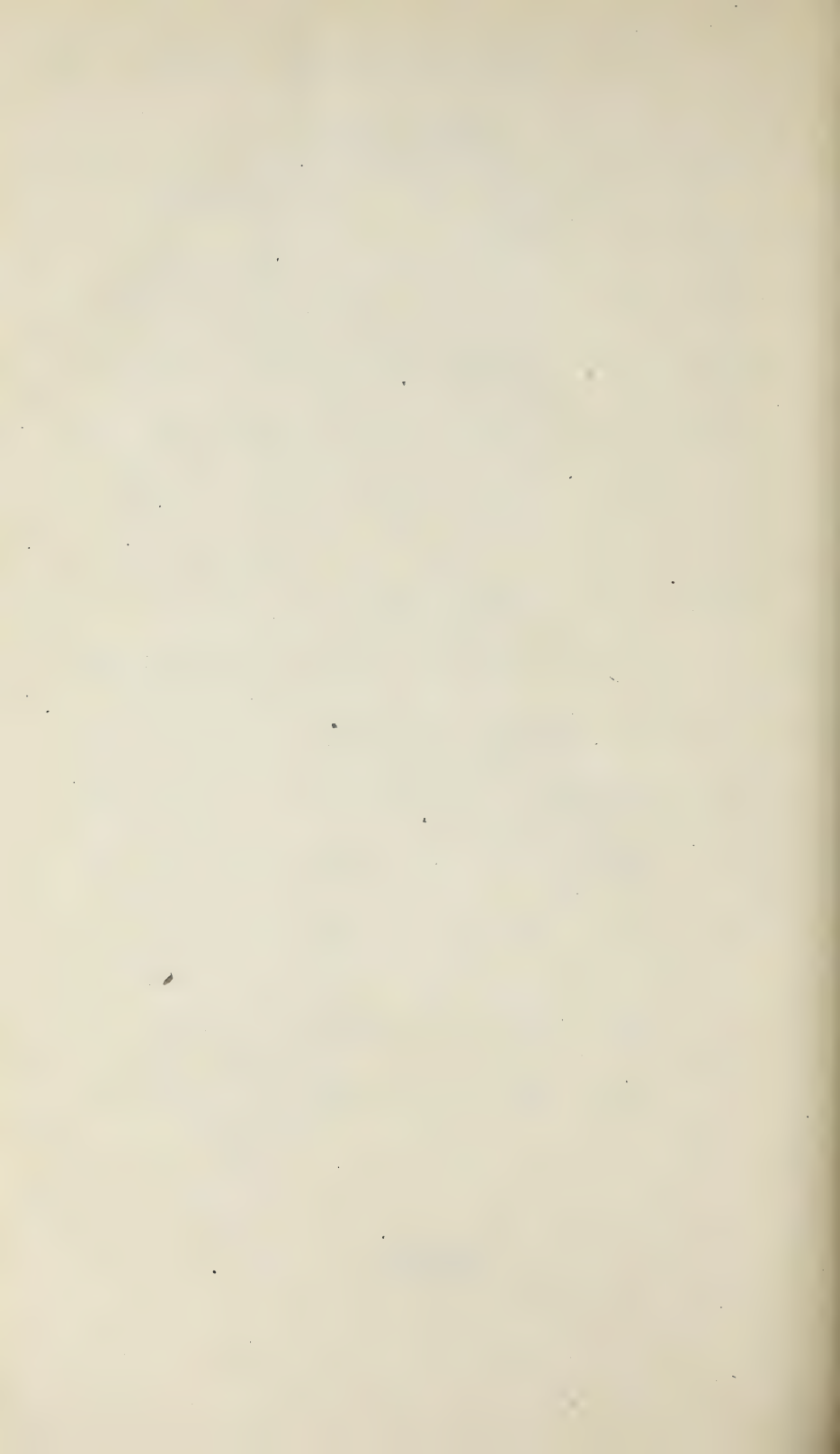
$3456 \div 7\frac{1}{8} =$

$5726 \div 16\frac{3}{5} =$

$3246 \div 2\frac{1}{2} =$

$6752 \div 12\frac{1}{3} =$

$3456 \div 5\frac{1}{8} =$



SCHOOL DOCUMENT NO. 4—1919
BOSTON PUBLIC SCHOOLS

BOSTON CONTINUATION SCHOOL

CIRCULAR OF INFORMATION
AND COURSES OF STUDY



BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, October 20, 1919.

Ordered, That the accompanying course of study for the Continuation School is hereby adopted, and that five thousand (5,000) copies be printed as a school document.

Attest:

THORNTON D. APOLLONIO,
Secretary.

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I.—GENERAL STATEMENT.

STEPS LEADING TO ESTABLISHMENT.

In 1909 the School Committee of Boston first took action leading to the establishment of continuation schools. Early in 1910 classes were organized for young people employed in the shoe and leather industry, the dry goods industry and department stores. These classes were in session four hours per week during the pupils' working time. The instruction bore direct relation to the industries in which the workers were employed. The desirability and effectiveness of these classes were reflected in the support which they were accorded by business men and by the general sentiment favoring continuation schools. This support led to further development of the Continuation School through legislation enacted by the General Court in 1913.

The support of continuation schools in Boston has not been confined to employers in the industries affected and to school officials. Hearty support has also been given by employers' organizations, such as the Chamber of Commerce, by workers' organizations, such as the Central Labor Union, and by parents' organizations, such as the Home and School Association.

LEGISLATION.

The Industrial School Act of 1911 (chapter 471) made possible the establishment of part-time schools for extending knowledge of the trades in which workers between fourteen and twenty-five years of age are employed. Under this law the state bears one-half the cost of the maintenance of such schools.

The Legislature of 1913 passed an act (chapter 805) permitting school committees to establish compulsory continuation schools for young workers between the ages of fourteen and sixteen years, regularly employed

at least six hours a day, and, with the approval of the State Board of Education, to make attendance thereupon compulsory. This act stipulates that instruction shall be given within the hours which children are permitted by law to work, such instruction to be not less than four hours per week. The act also provides that the state shall, under certain conditions, reimburse cities and towns for one-half the cost of the maintenance of such schools.

ESTABLISHMENT.

The School Committee of Boston, acting under the provisions of chapter 805, Acts of 1913, established compulsory continuation schools for all minors between fourteen and sixteen years of age obtaining employment certificates after January 1, 1914. The opening of classes, however, was delayed until September, 1914. During the interim between the establishment of the schools and the opening of the classes, much attention was given to a study of the pupils affected, teachers to be employed were given special courses of training, and a building located in the center of the business district was secured and equipped.

On July 2, 1919, under chapter 281, the existing law was amended and since that time all pupils in Massachusetts are required to complete the sixth grade before they may leave school and obtain an employment certificate. Chapter 311 of the Acts of 1919 made continuation schools compulsory throughout the State of Massachusetts in all communities which employed 200 or more fourteen to sixteen year old minors, providing that those communities accepted the law by the adoption of a referendum at the state election of November 4, 1919. This referendum was adopted in Boston and in most of the cities and towns in the state.

CHILDREN TO BE SERVED.

Statistics for the Commonwealth indicate that those children who graduate from elementary schools and those

children between fourteen and sixteen who leave school to go to work are approximately equal in number. A study of conditions in Boston shows that the proportion of children under sixteen who leave school to go to work is considerably smaller than for the state as a whole. Even though the number is smaller, the needs of these children none the less demand attention. Many factors, such as child labor laws and school attendance laws, tend to keep a larger number of pupils in the regular schools. The number who leave school prematurely is still so large that a real problem is presented, for it is from this group that the armies of the unskilled and unemployed are recruited.

REASONS FOR LEAVING SCHOOL.

It has been generally believed that most young workers leave the regular schools because of economic necessity in the home. "Economic necessity" is often used as an excuse when poor management at home, over-expensive home standards or parental disregard would better express the real cause. A study of the facts shows that 40 per cent leave school for reasons related to economic conditions in the home, while 60 per cent leave school because of reasons which may be related to conditions in the school. The number of young people to whom the regular schools make a strong appeal is yet too small. It is difficult to convince many children that the regular school offers that which can become a means to a livelihood. Lack of interest in regular school work results in failure, failure causes discouragement, and discouragement begets desire to leave school. Present tendencies in the regular schools are toward better adaptation to individual needs. As these tendencies develop, the number of children entering employment will decrease. This is as it should be, yet there will always be a considerable group who are doubtless better off in employment with part-time instruction.

FAILURES AND SUCCESSES.

A large number of those who prove failures in life and become burdens to society can trace the cause to lack of proper guidance and training in the home, in the school or in employment. Conversely, the majority of those who are crowned with success in life and who prove valuable contributors to the welfare of the community owe their advancement in large measure to proper guidance and training.

NEITHER HOME NOR INDUSTRY ALONE CAN PROVIDE TRAINING.

Industry is not organized to make possible the training of young workers. The old apprenticeship system is a thing of the past. Operatives are not taught successive processes because of the feeling that production would thereby be curtailed. Special operations require little general knowledge of an entire business and many young workers remain on unskilled jobs at low pay even when possessing capacity for skilled labor. Employees who know an entire business are scarce. For these reasons the number of workers prepared for promotion to positions as foremen and superintendents through industry alone is inadequate.

Industrial activity is educational up to the point where opportunity for development is exhausted. Then such activity ceases to be educative and workers become mere operatives. Monotony resulting from such uneducative and low skilled work either engenders restlessness and leads to constant shifting from job to job and from occupation to occupation or reduces the child's existence to a deadening rut of routine that makes for social unrest and tends to accentuate dormant vicious proclivities.

Homes are not always in a position to give the guidance and instruction which their children need. Industry is not so organized that this guidance and instruction can be given in employment. Part-time or continuation schools offer the most promising agency for doing this

work. It is obviously in the interest of the state to encourage, even require, that each prospective citizen reach the highest degree of efficiency of which he is capable. The state's obligation to those children who leave the regular day schools for employment is as great as is its obligation to those who remain within the schools.

Continuation schools are the direct outcome of modern industrial development, the subdivision of labor, the introduction of machinery, the growth of large plants where the individual is lost, the passing of apprenticeship, and the growing conviction that the state must provide educational opportunity to meet the needs of all its children.

The task of the Continuation School therefore becomes plain. The gap between the idealistic school life and the practical life of employment must be bridged. The means of intellectual and educational advancement which were lost with the passing of the apprenticeship system must be replaced. Society must be protected by reducing the ranks of the unfortunate and the ignorant. Further training in the fundamentals of education must be given but it must be offered in such form as the young worker will accept. The deadening influence of automatic work must be offset and a more perfect democracy must be established by affording each young worker his opportunity to make the most of himself. The young employee must be trained for useful, satisfying work as a reaction against the influences which tend toward parasitic existence; he must learn to occupy his time with wholesome self-improving activities; he must be helped in making his educational experience count; he must be aided in determining his most promising aptitudes; he must be assisted in forming habits of economy and thrift; he must be guided to make the best and the most of himself and of life.

The Continuation School by emphasizing the interdependence of employer, employee and community and by analyzing normal steps in promotion that operate in industry, must ever deal with the individual child rather than with the subject of instruction; must show to each

child his door to opportunity; must train him to keep that door open; must foster in him interest in his general self-betterment; must make clear the progressive steps leading to economic independence and must keep him on the "road to somewhere."

MUST BE COMPULSORY.

Certain demonstrated facts furnish strong arguments for the training of young workers. Our young workers have an inadequate command of the educational fundamentals. They do not conceive the meaning of civic responsibility, and they have little idea of the conditions essential to economic independence. Neither they nor their parents realize that success in a given calling depends upon adequate training. This accounts for the comparatively small numbers who have volunteered to take advantage of the opportunities which have been open to them. This fact demands that continuation schools for young workers be made compulsory.

ATTITUDE OF EMPLOYERS.

Employers are few indeed who are unwilling to coöperate heartily in the establishment of continuation schools for their own workers. Our experience in Boston has established this assertion as an indisputable fact. School committees and school officials often hesitate in the establishment of continuation schools because of imagined difficulties with employers. The employer's first reaction is likely to be unfavorable. The annoyance of arranging shifts, shorter hours for the same wage, lack of confidence that a school is able to do practical work,—these appear in the employer's mind as almost insurmountable obstacles. With business men, obstacles are never too great to be overcome when the results promise to justify the change. No one realizes more fully than the employer the necessity of providing for future employees who will be intelligent, efficient and contented. Coöperation between the schools, the employers and the home is not only possible, it is highly desirable. Each is in need of the other's assistance. Each is largely helpless without the other's assistance.

II.—ORGANIZATION.

ADMISSION.

Before a child between fourteen and sixteen years of age can be legally employed in any factory, workshop, manufacturing, mechanical or mercantile establishment, such child must secure an employment certificate and place it on file with his employer. Employment certificates are granted only by the superintendent of schools or his duly authorized representative. A child under sixteen may secure an employment certificate upon presentation of (a) a birth certificate showing him to be at least fourteen years of age; (b) a school record showing that he has completed the sixth grade and has attended the regular day schools at least 130 days since his thirteenth birthday, and (c) a promise of employment signed by his prospective employer; provided, however, that such child passes the doctor's examination showing him to be physically fit for the work of his promised employment. Prior to the delivery of the employment certificate, the child is registered for the Continuation School, assigned to attend at the proper hours on a given day or days and directed as to the location of his class.

THE GROUP TO BE SERVED.

The problem is to provide suitable part-time instruction for not less than four hours each week during working hours for the fourteen to sixteen year old boys and girls who leave the regular schools to go to work. The characteristics of adolescent pupils have been definitely classified. The Continuation School group reveals these salient characteristics more markedly than do pupils in regular schools. This age is a period of rapid growth, of liability to nervous breakdown, of tremendous energy, — especially in boys, — of periods of depression and apparent laziness, of physical awkwardness, quick temper, self-consciousness, exaggerated opinion of their own rights, of moods

and impulses, of violent likes and dislikes, of love of adventure, of violent misunderstanding caused by not being on the right apperceptive basis. There is need of plain nutritious food, exercise and fresh air, regular habits and plenty of sleep. The age of imitation and plastic memory is past. Reasoning ability, judgment, power of attention are growing. The children reflect environment for good and for evil. Team work appeals to them. They respond willingly to firm, quiet, courteous treatment. They resent inflicting of penalties. They like to know the reason of things.

They are more quiet and steady in conduct than the children in regular schools. Less than 40 per cent of them have left school to go to work because of economic necessity. More than 60 per cent have gone to work because they will not or cannot carry the work of a regular school. They dislike school. Forty per cent of them are children over age, who have left school before reaching the eighth grade. Naturally a larger percentage of mentally deficient children is found in this group than in an equal number of day school children.

About 60 per cent of our pupils are graduates of elementary schools, or are first-year high school pupils. Most of these so-called high school pupils have failed in their high school work. Less than 5 per cent of them reached the second year of high school or a higher grade. In age they are very evenly distributed from fourteen to sixteen, but during the last two years they have been going to work at a younger age, so that over 60 per cent have not reached their fifteenth birthday. It is evident, then, that the chief problem of the Continuation School is to provide suitable work for elementary school graduates. The usual distribution of the sexes is: Boys, 60 per cent; girls, 40 per cent. During the past year, however, the number of girls has tended to increase, so that now we have boys 56 per cent and girls 44 per cent.

Very few of these pupils are blocked off from desirable jobs or promotion because of the required school attend-

ance. Practically no such cases arise among the girls. Among the boys the question does not arise in more than 3 per cent of the cases and when it does, practically every such case is satisfactorily adjusted through a visit of a teacher. The determining factors in obtaining desirable jobs and promotion are ability, personality and industry on the part of the pupil rather than the existence or absence of a compulsory school attendance requirement.

Drifting from job to job seems to be inherent. The group as a whole averages two jobs a year. The drifting is restricted, however, to about 20 per cent of the children and this small group will average from eight to twelve jobs per year.

FUNCTIONS.

The characteristics of the group just described determine the functions of the part-time school. These functions are: (1) the conservation of the education already acquired, and the extension of it; (2) the providing of opportunity for prevocational experience to help in the choice of a vocation; (3) vocational guidance and follow-up work; (4) the establishment of an efficient employment bureau; (5) tying school work with the job so far as possible.

EQUIPMENT AND CLASSES.

The value of prevocational shops in continuation schools has been so much discussed that there is a prevalent error that academic work is neglected. Such is not the case. Each pupil devotes half of the school time to academic work, and many of those who have left school in the lower grades devote full time to academic work.

Housing may be provided in scattered rooms of regular schools or in a central plant devoted exclusively to part-time work. The central plant is decidedly preferable. Unless a number of these children are grouped together it is impossible to provide the variety of shop work and class work essential to their individual needs. The responsibility for the group should be centralized. It will surely

be neglected if delegated to an already overburdened master of a day school to whom this work must necessarily be a side issue.

Classes provided are, for boys: General classes — entry and ungraded; prevocational shops and classes — machine, electricity, printing, woodworking, sheet metal, mechanical drawing; commercial — office practice, bookkeeping, and typewriting. In addition, where a store or factory has enough young workers to make one group or more, and a class room is available, a teacher is provided for classes in these places of employment. For girls, the general, commercial, store and factory classes are the same as for boys — the detailed work, of course, being adapted to girls. The prevocational classes are: Dressmaking, millinery, power machine operation, cooking, sewing and other household arts.

Details on courses of study cannot be given here except to note that in arithmetic and English interest factors derived from the pupils' employment and shop work make them very different studies from the arithmetic and English which these children disliked in the day schools. All pupils have civics and hygiene. The basic idea which affects Continuation School work is that we must make good citizens. These children need simple, homely, personal things in civics and hygiene. The vital thing for each of them is not "How many members are there in the lower house of the Legislature?" or "How many bones are in the foot?" but "What is my duty as a young worker to my family, my neighborhood and my employer?" and "What care should I observe to keep myself in good health and to make myself attractive and capable?"

Four hours per week is a very short time, but the ever-astonishing fact is how much the pupils accomplish in four hours rather than how little. The influence of the school stays with these children from week to week, modifying their point of view, directing their thoughts and activities. Ten weeks of such experience mean very much more than the mere 40 hours of school given during that period. In time we shall probably come to 8 hours a

week or even half time. But this work is yet in the experimental stage. A great deal of time and expense are involved in getting equipment and training teachers. An increase of hours can more wisely be made after a body of specially trained teachers has been developed.

An approximate distribution of this 4 hours or 240 minutes is: For shop or commercial work, 120 minutes; arithmetic and drawing, 40 minutes; English, oral and written, 40 minutes; civics, 20 minutes; hygiene, 20 minutes. The related work for shop studies is essentially mathematics and drawing. If it is given by the academic teacher it needs close coöperation from the shop instructor. In many cases it is wise to have it given directly by the shop instructor, but not in the shop. Experience shows that as long as the class stays in the shop, related work is neglected because straight shop work is continued.

CLASSIFICATION OF PUPILS.

All new pupils are placed in an entry class where after careful observation, supplemented so far as possible by a follow-up visit, they are transferred to the class they choose. They rarely stay in the entry class more than three weeks. A subsequent transfer from one class to another is freely allowed, but relatively few pupils ask for it. The first classification of pupils comes in requiring those who have had high school work to report on Wednesday, grammar school graduates on Tuesday or Thursday, and lower grades on Monday or Friday. High school pupils tend toward commercial work. Among boys, the brightest ones tend to elect machine shop or electrical work, and the slowest woodworking. The ability to do a certain piece of work, especially in shop work, depends quite as much on age and environment as it does on having completed a certain number of grades in the regular school. Accordingly the seventh grade pupil and the one who has finished the first year of high school are fairly equal in ability in shop and related work.

New pupils enter the school every day in the year just as old pupils reaching the age of 16 years leave it. This

makes it necessary to have each week's work an independent unit so far as possible. At the same time there is an instructional progression in these units.

In relating school work to the pupils' employment, commercial subjects present few difficulties; store and factory classes work out well. In the central school the shops represent fundamental trades so that most of the common trade assets which a pupil acquires there, such as precision, neatness, use of drawings, use of stock, and setting machines, he can carry over in any trade. No attempt is made to separate trade extension pupils from prevocational pupils in the shops. The number of pupils whose school work ties up fairly closely with employment is: In store and factory classes, approximately 100 per cent; in commercial classes, almost 100 per cent; in power machine operation, 50 per cent; in dressmaking and millinery, less than 5 per cent; in printing, 50 per cent; in machine shop, 25 to 40 per cent; in woodworking and electricity, less than 5 per cent.

TEACHERS.

For teachers there are men for boys' classes and women for girls' classes, except in commercial studies where the classes are mixed. Even commercial classes should be segregated. The teaching program covers 32 hours per week. A shop teacher has 28 hours of shop teaching, and the rest of the time for the upkeep of the shop. An academic teacher has 20 hours of teaching and uses the remainder of the time in making follow-up visits to the pupils' places of employment or homes, in order that information may be obtained as to the pupils' individual needs. In general, one shop teacher and one academic teacher form a team which handles from 175 to 280 pupils per week in ten groups of from 17 to 21 pupils each. The academic teacher is expected to keep in touch with the shop work and the shop teacher with the academic work.

The teachers do very little group teaching, trying in every way to make the class work individual.

Teachers must be specially trained for this work. The shop instructors are skilled trades people who have had at

least eight years' trade experience and have taken the special instructors' training course. Academic teachers are Normal School graduates or college graduates who have had a special instructors' training course. It requires two or three years of Continuation School experience for the average good teacher to get a mastery of the special problems.

SHOP WORK.

Shops are equipped with man-size machinery, and in the shop, exercise work is reduced to a minimum. A commercial if not marketable product is expected wherever possible.

Productive shop theories are very hard to apply in part-time work. With a different group in the shop every two hours, involving loss of time and supplies, delayed deliveries, and a varying degree of ability, it is difficult to carry an outside order through satisfactorily. In general, the shop compromises on a set of preliminary exercises, and a series of shop projects leading to a commercial or marketable article. The school must try to get an instructional progression in work, and at the same time have each week a unit in itself. After all, the job is instruction. The product is boys and girls. All recognize the value of real work and marketable products, but there remains a great deal to be said as to the value of the exercise which trains in fundamental operations. Straight, productive work is obtained on power machines, dressmaking, millinery, and home sewing, the latter product being absorbed by the pupils. In printing there is no lack of real products. Machine, woodworking, and sheet metal shops have a combination of exercise work and real work. The electrical shop has no commercial product since it is impossible to go out on installation work. The shop exercises, however, are very practical.

COST OF INSTRUCTION.

The cost of this instruction is relatively high. The annual per capita cost is about \$15 as against \$45 for elementary schools and \$85 for high schools. The pupil

hour cost for Boston for the year 1918 was \$0.103 as against \$0.21 for the Boys' Trade School, \$0.172 for the Girls' Trade School, \$0.084 for all high schools, and \$0.049 for all elementary schools. It is to be noted that the state pays one-half of our costs, which would make the net cost to the community something between elementary school and high school costs.

VOCATIONAL COUNSELLING.

Vocational counselling forms a very important part of the Continuation School work. The average child's entrance into industry is governed in a measure by childish whims, by the caprices of companions, and by parents' ill-formed ideas. This must continue to be so until there has been created a background of experience upon which an intelligent choice of a calling can be made.

This background of experience is provided not only through the pupils' opportunity in the school to determine his aptitude for various callings, but also through group discussions on commercial and industrial opportunities in Boston, through assemblies addressed by outside speakers, and through conferences with individual pupils growing out of follow-up visits at the home and place of employment.

FOLLOW-UP WORK.

Perhaps the most comprehensive and effective method devised for adequate vocational counselling is the plan of follow-up work inaugurated at the Continuation School. Approximately one-third of each academic teacher's time is given to visits at pupils' homes and at their places of employment. Thus the home, the school and the employer are brought into close contact and each pupil is considered in relation to his individual needs. The value of this follow-up work depends largely upon the ability of teachers to interpret the significance of their observations, to see the child's needs and then to apply the proper instruction and influence.

ATTENDANCE AND DISCIPLINE.

Evening school attendance does not exempt children from attending the Continuation School but permits to attend evening school are freely given to all children who ask for them. About 5 per cent of all the children ask for and receive evening school permits.

Discipline in the school is in general very easy. These children are steadier than children of the same age in regular schools. They are allowed considerable freedom which they do not abuse.

Attendance and truancy make a good showing in comparison with other schools. Two consecutive absences make a "truant." Investigation by the attendance department shows that more than half of such absences are understandable and excusable. This group among the girls is about one-third of 1 per cent; among the boys it amounts to about 3 per cent. There are those who are troublesome and are wilfully truant. This group of children suffers much from sickness and accident. Many of them run away from home. They frequently change home addresses and are permanently or temporarily lost. A normal state of affairs for the Boston Continuation School is indicated by these figures for the week of February 17, 1919:

	Boys.	Girls.	Total.
Absence verified and approved.....	99	61	160
Truants, that is, reason for absence unverified and not approved.....	258	17	275
Those O. K. in all classes.....	3,043	2,635	5,678

In the latter group the percentage of attendance from September to the end of June, 1919, was 96 per cent. During the school year ending June, 1918, the percentage of attendance in the Continuation School was 92 per cent as against 92 per cent for all elementary schools and 94 per cent for all high schools in the city.

WAGES AND TYPES OF WORK.

The wages and types of work in which these children engage are not determined by the fact that they must attend Continuation School. The determining factors are: (1) the supply and demand of labor in general; (2) restrictive legislation on hours of labor; (3) restrictive legislation on the use of certain dangerous machines; (4) restrictions as to the age and other conditions governing apprenticeship. Most of these children work for a flat weekly wage which is not modified by the fact that they must attend the Continuation School. Where they work on commission or piecework they suffer some loss because of their attendance at school. The convincing proof of the foregoing is shown by the fact that during five years the numbers of pupils were: 2,300, 3,400, 4,500, 5,500, 6,500, and that meantime the average weekly wages increased as follows: \$4.10, \$5.25, and \$7.00.

It should be noted that the part-time education of the fourteen to sixteen year old worker is a very different problem from that of the sixteen to nineteen year old group. The first is the drifting, adolescent child who needs essentially prevocational experience and vocational guidance with opportunity for some trade extension work. The second needs trade extension work including related work, and training in citizenship. For the second group training on the job should be given by trained, instructing foremen, on actual production, under the supervision and with the approval of educators. For the younger group the fundamentals of actual shop conditions can be fairly well supplied in the school shop. But for the older worker shop conditions are too varied and complicated to be reproduced in school. This group should get shop training in the shop, and from the part-time school should get training in citizenship, education for avocation rather than for vocation, and should specialize in drawing, reading blueprints, related mathematics and advance work in English, history, trade mathematics and science.

In conclusion it should be noted clearly that the problem

of the fourteen to sixteen year old worker is essentially a local problem. Deductions made from the experience of the Boston Continuation School are valuable and suggestive. They are not necessarily conclusive as to the best method of handling these children in another community.

TERMS AND SESSIONS.

The terms and holidays of the Continuation School are the same as those of the regular schools.

The sessions are held between 8 a. m. and 12 m. and between 1 and 5 p. m. each week day except Saturday. In general, pupils' assignments are made to one session of four consecutive hours. In commercial classes two two-hour sessions may be allowed. In very exceptional cases arrangement is made to allow pupils to attend one hour on each of four days.

When classes are held in the place of employment sessions are arranged to meet the convenience of employers provided such arrangements make possible the proper assignment of teachers and are within the provisions of the law.

OUT-OF-WORK PUPILS.

Pupils temporarily out of work need constant attention. They cannot be returned to the day schools because they do not fit there. On any given day from 10 per cent to 15 per cent of the boys are out of work and from 5 per cent to 8 per cent of the girls. An efficient employment department is maintained in the school and the children are instructed to report there whenever they lose a job. This gives the school a good hold on absentees. The value of the employment work cannot be over-emphasized since it keeps these children from running the streets in idleness.

A small number of children do not wish to work; perhaps 3 per cent of the boys and almost none of the girls. The others are eager to get back to work and are very grateful for the assistance which the school gives them.

Without this help the majority of this group tend to become transients in employment. They view the holding of a position lightly. They remain away from work on the slightest pretext and give no notice to their employers as to the reason for their absence. They leave positions because of mere whims even when they have no other employment in prospect.

Before this work was inaugurated, these pupils were generally uncouth and untidy in personal appearance. They knew very little about the sources of employment and still less about approaching a prospective employer. It seldom occurred to them that good references and tidy appearance are essential. They secured employment only where personal appearance and references were not factors.

Help to the out-of-work group and the type of child above described is distinctly a Continuation School problem. The school often exerts its influence upon this type of child most effectively during periods of unemployment.

Girls who have sought work in the factories and failed are learning to operate power machines, afterwards securing work and succeeding in the same factories where they failed before. Others are preparing for positions as bundle, errand and cash girls in department stores, afterwards securing employment and succeeding.

While the training which the out-of-work group receives leads directly toward employment, the fact that these children are receiving much effective instruction in the fundamentals of education must not be overlooked. The need for education is made to become more apparent to them and a considerable number are led to return to the regular schools.

Previous to the recognition of this group, pupils dropped from the school with the loss of employment and roamed at large on the plea of looking for work. Often they spent months without success. Increasing numbers are now remaining in the school when out of work and they succeed in securing employment in days or weeks where formerly it was months.

When conditions have made such action possible special classes meeting twenty hours each week have been arranged for out-of-work pupils for whom it was impossible to find employment.

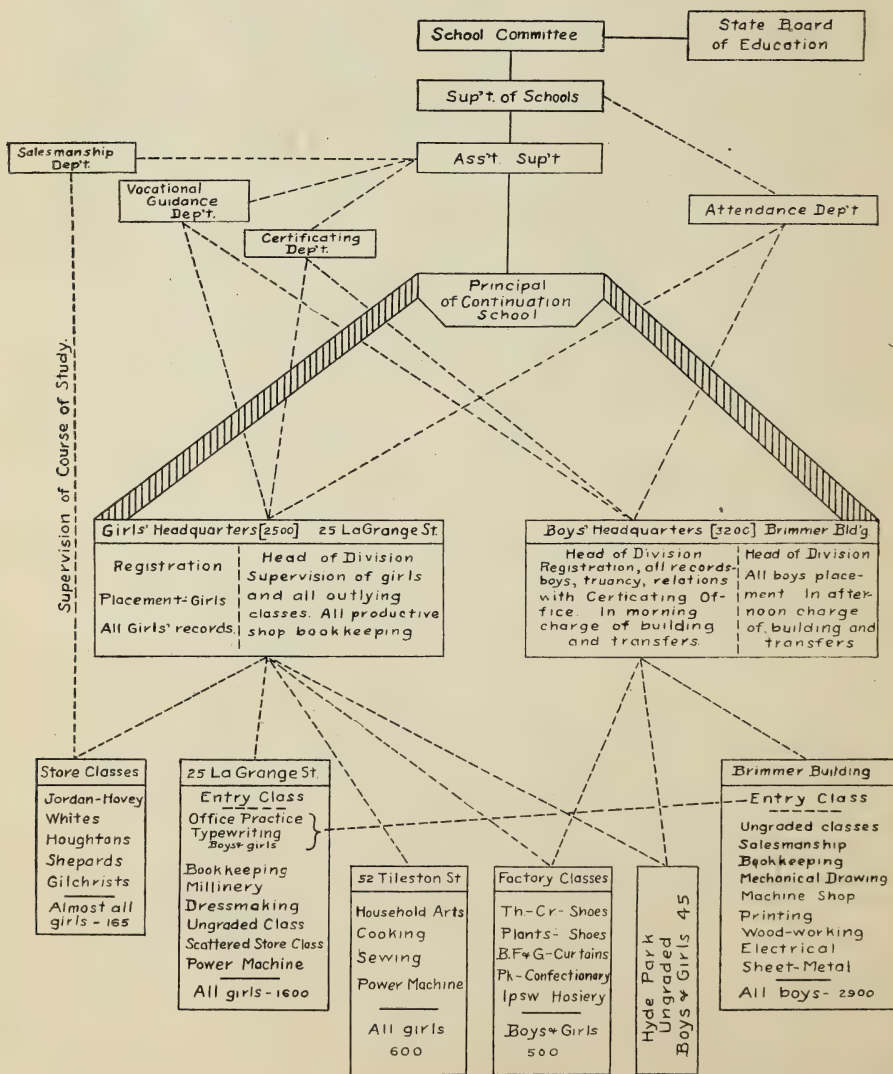
The value of these classes has been very great. When, however, employment is reasonably plentiful, out-of-work pupils are required to report each day to the employment department rather than to a special class. Under such circumstances lack of employment rarely persists beyond three or four days.

III.—LOCATIONS OF SCHOOLS AND CLASSES.

The attached chart shows the locations of schools and classes and also shows the relation of the entire school to other departments of the public school system.

ORGANIZATION OF BOSTON CONTINUATION SCHOOL

MAY 1, 1919



IV.—PROGRAM.

In general, in a store or factory class pupils attend sessions of 2 hours each twice a week. The same teacher meets the pupils at both sessions. The hours are arranged so far as possible to meet the convenience of the employer. Classes do not meet before 8 a. m., after 5 p. m., or on Saturdays.

In one of the central buildings a team of teachers handling in the course of the week ten groups of pupils in the same study arrange their hours as indicated below. This arrangement in general gives a teacher 2 hours of teaching, then 2 hours of follow-up work, then 2 hours of teaching. The week's program carries 20 hours of instruction and approximately 12 hours of follow-up work. In the following typical programs the number means the number of the room.

	MONDAY. (Hours.)				TUESDAY. (Hours.)				WEDNESDAY. (Hours.)				THURSDAY. (Hours.)				FRIDAY. (Hours.)				Total Hours of Instruction.
	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	
Typewriting teacher...	34	...	34	...	34	...	34	...	...	34	...	34	...	34	...	34	34	...	34	...	20
Academic teacher.....	...	34	...	34	...	34	...	34	34	...	34	...	34	...	34	...	...	34	...	34	20

In a prevocational shop where there are several academic teachers and shop teachers the arrangement whereby the shop teacher gives 28 hours of instruction each week and the academic teacher gives 20 hours of instruction is indicated in the typical program given on page 26. It will be noted that an extra academic teacher combines with one shop teacher in some classes and with another shop teacher in other classes. In the periods marked "X" this academic teacher may be used for instruction in some other line of

work. In this program one shop and one class room are in practically constant use. In a third room shop work and academic work alternate.

	MONDAY. (Hours.)				TUESDAY. (Hours.)				WEDNESDAY. (Hours.)				THURSDAY. (Hours.)				FRIDAY. (Hours.)				Total Hours of Instruction.
	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	8 to 10.	10 to 12.	1 to 3.	3 to 5.	
Academic teacher.....	9 ...	9 ...			9 ...	9 ...			9 ...	9 ...			9 ...	9 ...			9 ...	9 ...			20
Shop teacher.....	11	11 ...	11		11	11 ...	11		11	11	11 ...		11	11	11			11	11 ...	11	28
Extraacademic teacher, ...	9 ...	X			9 ...	9			9 ...	9 ...			9 ...	9 ...				9 ...	X		20
Shop teacher.....		40 ...	40			40	11	40	40		40	11	40	11	40		11	40		40	20
Academic teacher.....	40		40		40		40			40		40		40		40	40		40		28

With no exception applying to the first program and with very few exceptions applying to the second program it is possible to arrange so that an individual pupil may come (a) four hours on one day of the week; (b) two hours on two days of the week; (c) one hour each on four days of the week. A sample program is given below:

Typical Program of Studies — Continuation School.

General academic:

- 1st hour: English, civics.
- 2d hour: arithmetic.
- 3d hour: commercial geography, spelling.
- 4th hour: English, mental arithmetic, hygiene.

Prevocational office practice:

- 1st hour: business English, civics.
- 2d hour: commercial geography, hygiene.
- 3d hour: typewriting, bookkeeping, arithmetic, filing.
- 4th hour: typewriting, bookkeeping, filing.

Prevocational shop work:

- 1st hour: shop mathematics, hygiene, safety.
- 2d hour: English, spelling, civics.
- 3d hour: shop.
- 4th hour: shop.

A full program of four hours' work (1st hour, 2d hour, 3d hour, 4th hour) is provided on each day, but in different sequence.

Combination A.— For a pupil coming four hours in a week, any morning or any afternoon of the week, the program on any day would provide for him.

Combination B.— For a pupil coming four hours in a week, but on two different days on two consecutive hours, 8-10, 10-12, 1-3, 3-5, programs of two hours on Monday, Wednesday or Friday, and two hours on Tuesday or Thursday, would provide for him.

Combination C.— For a pupil coming one hour a day for the first four days of the week, or for the last four days of the week.

TIME.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
A. M.					
8 to 9... ..	1	2	4	3	1
9 to 10... ..	2	1	3	4	2
10 to 11... ..	3	4	2	1	3
11 to 12... ..	4	3	1	2	4
P. M.					
1 to 2... ..	1	2	4	3	1
2 to 3... ..	2	1	3	4	2
3 to 4... ..	3	4	2	1	3
4 to 5... ..	4	3	1	2	4

V.—ROUTINE PROCEDURE.

The routine procedure of the school is shown in the blank forms and reports used. These are here reproduced in the sequence in which they are used with regard to the average pupil.

1. Pupil Arrives at School with Slip from Certificating Office.

(3 x 5 pink slip.)

Pupil's Name.....Emp. Cert.

Employer.....

Employer's Address.....

Will be 16.....	Take this slip to the office of the Continuation School, Brimmer Building, Common Street; have it signed and bring it back to 218 Tremont St. <i>at once. You are required to attend Continuation School four hours each week until you are sixteen years old.</i>
First Cert.... | Re-issue...	

Attendance O. K.

Signed.....Teacher

If teacher defers approval of attendance write reasons on back of slip.

2.— No. 250 Card Made out as Below for Alphabetical File in Office.

(4 x 6 white card.)

BOSTON PUBLIC SCHOOLS 250 OFFICE RECORD CONTINUATION SCHOOL Employment Certificate	First Name	Initial	Last Name	Pupil's Number
	Will be 16	Residence	Street	District City
	Residence (2)			

Grade & School Last Attended	Employer	Address
Date of Leaving School		
Country of Birth		
Parent or Guardian		
Vocational Preference		

Date	Class	Entry	Day & Hour	Teacher	Teacher
.....
.....
.....
.....

3.— Card Below for Employer. Shows Day and Date of Pupil's Assignment to Class.

(Postal card size and stock.)

BOSTON	COMPULSORY CONTINUATION SCHOOL
251 PUBLIC SCHOOLS	ASSIGNMENT TO CLASS
First Name	Initial Last Name

You are required by law (Chapter 805, Acts of 1913) to attend Continuation School, beginning on.....191.....

You have been assigned to the following class:

Location of School	Days	Hours	Pupil must present this card at Room: Teacher
Brimmer Building		To.....	
31 Common Street		To.....	

OWEN D. EVANS, *Principal*.

4.— No. 257 Card. It is a Duplicate of the No. 250 Card and is held by the Class Room Teacher.

(4 x 6 colored card.)

BOSTON PUBLIC SCHOOLS 257 TEACHER'S RECORD OF PUPIL CONTINUATION SCHOOL		First Name	Initial	Last Name	Pupil's Number:
Employment Certificate		Will be 16	Residence	Street	District City
		Residence (2)			
Grade & School Last Attended		Employer		Address	
Date of Leaving School					
Country of Birth					
Parent or Guardian					
Vocational Preference					
Date	Class	Entry	Day & Hour	Teacher	Teacher

5.— Card Sent on Pupil's First Absence.

(Postal card size and stock.)

[SEAL] BOSTON PUBLIC SCHOOLS
CONTINUATION SCHOOL
BRIMMER BUILDING, COMMON STREET

Tel. Beach 2086

Date.....

The law requires the attendance of.....
at the Continuation School. As the records show an absence for today,
kindly send the pupil to us tomorrow to make up the lost session, or send a
letter with a satisfactory explanation.

Boston School Regulations, Sec. 488.—"Any pupil who shall absent himself
from a session of a Continuation School at which his attendance is required
may be required to make up the lost session. The Superintendent or his
agent.....may suspend or refuse to grant an employment certificate of
such pupil until the lost session or sessions are made up."

OWEN D. EVANS, Principal.

6.— Follow-up Slip on which Record of Teacher's Visit is Made.*(3 x 6 paper slip.)*

258

NOTES FOR FOLLOW-UP RECORDS

BOSTON

1918

PUBLIC

CONTINUATION SCHOOL

SCHOOLS

Visit by.....on.....to { Home of.....
 { Place of employment of.....

Time spent on visit.....

Name of Pupil

Address of Firm or Pupil

Name of Firm

Purpose of visit.....

Result of visit.....

7.— Information Necessary because of Transfer to Another Class.*(Reverse side of No. 6.)*

NATURE OF EMPLOYMENT

Will be 16.....

How long in present class.....

Class chosen.....Day.....Hour.....

No.	257 from	to	check	257 from	to	check	250

8.— Second Absence Post Card.*(Postal card size and stock.)*

BOSTON PUBLIC SCHOOLS

CONTINUATION SCHOOL

[SEAL]

BRIMMER BUILDING, COMMON STREET

Tel. Beach 2086

Your son.....was absent today
 from the Continuation School for the second consecutive session. Unless he
 reports immediately to make up the lost sessions the attendance department
 will be notified and the proper action started to have the boy's working
 certificate suspended.

OWEN D. EVANS, *Principal.*

9.— Attendance Officer's Information Card.

(2½ x 6 colored card with perforated stub.)

BOSTON
92A PUBLIC
SCHOOLS

ATTENDANCE OFFICER'S INFORMATION CARD.

Compulsory Continuation School.....Date.....
Pupil's Name | Age Sept. 1 | Empl. Cert.

Date of last attendance | Dates of absence | Home address

Parent's name

Employer's name | Employer's address

Remarks

Teacher

Principal

The Attendance Officer will note on the back of this card the details of his investigation with the dates of the completion thereof.

(Stub of No. 9.)

Date.....

Pupil's name

Teacher

OFFICER FILL OUT BELOW

Cause of Absence

Officer

Date.....

10.— Issued when Employer Requests a Card Showing that Pupil was Present in Class.

(2 x 4 white paper slip.)

[SEAL]

BOSTON CONTINUATION SCHOOL
BRIMMER BUILDING, COMMON STREET

Date.....

Name.....

was present today.

Teacher

11.— When the Pupil Loses Employment in a Store or Factory where a Class is Maintained, this Card is Sent to Him.

(Postal card size and stock.)

BOSTON PUBLIC SCHOOLS
CONTINUATION SCHOOL

[SEAL]

Date.....

You are to report at the Continuation School, Common St., on.....

.....for assignment to class.

If you need help in getting a new position, report at once. We shall be pleased to assist you. Bring this card with you.

OWEN D. EVANS, *Principal.*

12.— This Slip is Received by Teacher when the Pupil's Hours are Changed.

(2 x 4 colored paper slip.)

CHANGE OF HOURS

Teacher.....

Pupil.....

Class.....

Hours.....

Change hours to.....

Date.....

13.— When the Pupil Loses Employment this Card is Sent to the Teacher or to the Office.

(2 x 4 colored paper slip.)

Teacher.....

LOSS OF EMPLOYMENT

Name.....

.....

.....

.....

.....

14.— Notifies Office or Teacher of Change of Home Address.*(2 x 4 colored paper slip.)*

Teacher.....

CHANGE OF HOME ADDRESS

Name.....

Address.....

Date.....

15.— Notifies Office or Teacher of New Position.*(2 x 4 colored paper slip.)*

Teacher.....

NEW POSITION

Name.....

Firm.....

Address.....

Date.....

16.— In the Temporary Absence of a 257 Card this Slip is Used as a Substitute until the 257 Card Arrives.*(2 x 4 colored paper slip.)*

Teacher.....

RECEIVE AND ADD TO YOUR CLASS LIST.

Name.....

Class.....

Day and hours.....

Date.....

Teacher keep this slip and see that 257 card comes to you soon.

17.— Office Calls in 257 Card from Teacher.*(2 x 4 colored paper slip.)*

Teacher.....

Send to office 257 card of

.....
and remove this name from your class list

Class.....

Day and hours.....

Date.....

18.—Card Sent to Parent of Pupil Who is Absent and Out of Work.

(Postal card size and stock.)

BOSTON PUBLIC SCHOOLS

CONTINUATION SCHOOL

BRIMMER BUILDING, COMMON STREET

[SEAL]

Date.....

Tel. Beach 2086

Our records show that.....
is out of work and absent from school. The law requires this pupil to attend Continuation School four hours each week until the age of sixteen.

We constantly help out-of-work pupils to get employment but of course we cannot help the pupil who is not here. We also have classes and shops where our boys and girls do work leading to preparation for business or a trade. Help us to help your boy or girl by seeing that attendance is regular and that full use is made of our employment bureau and of the unusual opportunities for class work. You are cordially invited to visit the school so that we may show you the opportunities it offers.

OWEN D. EVANS, *Principal.*

19.—Pupil Makes up all Time not Checked off on this Slip.

(4 x 4 white paper slip.)

MAKE-UP RECORD.

Date.....

Teacher.

is to make up time as follows:

(Pupil is to Attend all Sessions not Cancelled.)

Monday.....	8-10	10-12	.....	1-3	3-5	.....
Tuesday.....	8-10	10-12	.....	1-3	3-5	.....
Wednesday....	8-10	10-12	.....	1-3	3-5	.....
Thursday.....	8-10	10-12	.....	1-3	3-5	.....
Friday.....	8-10	10-12	.....	1-3	3-5	.....

Check each period as time is made up and return this slip to the office when schedule has been completed.

Signed.....

20.— Sent to Pupil's Former Employer Requesting Return of Boy's Certificate.*(Postal card size and stock.)*

CONTINUATION SCHOOL

[SEAL]

BRIMMER BUILDING, COMMON STREET

If..... is no longer
in your employ, kindly return his certificate to the Certificate Office, 218
Tremont St., Boston, Mass.

OWEN D. EVANS, *Principal.***21.— Daily Attendance Record from Each Teacher. This Information Shows where it is Possible to make Transfers.***(2 x 4 white paper slip.)*

Day.....Date.....191.....

ATTENDANCE.

	8-9	9-10	10-11	11-12	1-2	2-3	3-4	4-5
Number be- longing.								
Number at- tended.....								

Teacher

22.— Weekly Report Stating Number of Pupils Belonging at End of Week.*(3 x 5 white paper slip.)*

CONTINUATION SCHOOL

WEEKLY REPORT OF NUMBER OF INDIVIDUAL PUPILS.

Each teacher will send or mail this report every Friday evening so that
it will arrive at 25 La Grange street not later than Saturday morning.

I have 257 cards as follows:

Representing males coming to me 4 hours per week.....

" " " " 2 " " "

" females " " 4 " " "

" " " " 2 " " "

Date.....Teacher.....

23.— Monthly Report of Teacher.
(4 x 6 colored card.)

BOSTON PUBLIC SCHOOLS 256 TEACHER'S MONTHLY REPORT CONTINUATION SCHOOL		Month 191	Class	Division	Teacher	Rank								
			VOLUNTARY		GENERAL		PRE-VOCATIONAL		TRADE EXTENSION		TOTALS			
			Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total
10. Number of pupil hours of instruction based on the number belonging.....														
11. Number of pupil hours of instruction based on attendance.....														
A. Per cent of attendance.....			F. Number of pupils belonging at end of last month											
13. Number of cases of pupils' tardiness.....			GAINED. (2) By new enrollment (E).....											
14. Number of cases of pupils' dismissal.....			By reentry (e).....											
16. Number of follow-up visits at homes.....			H. By transfer (Tr).....											
At places of employment.....			I. Otherwise.....											
B. Days of service of teacher.....			J. Total gain.....											
C. Dates of teacher's absence.....			Lost. (5) By permanent discharge (D).....											
D. Number of hours spent by teacher in follow-up work.....			(7) By temporary discharge (d).....											
E. Number of hours of instruction.....			K. By transfer (Tr).....											
8. Number of different pupils belonging at end of this month.....			Male	Fem.	Total	L. Otherwise.....								
M. Number coming 4 hours per week.....			M. Total loss.....											
N. Number coming 2 hours per week.....			N. Net gain or loss.....											

24.— Trimonthly Record of Class Standing Filed for Each Pupil on December 1, April 1, and June 30.

(3 x 5 colored paper slip.)

TRI-MONTHLY RECORD.

Pupil's Name

Number

RECORD SINCE LAST TRI-MONTHLY REPORT.

Hours Present.	Absent.	Truant.	Tardy.		Reliability.	Application.	Courtesy.	Neatness.	Arithmetic.	English.	Penmanship.	Vocational Aptitude.
				Academic Instructor								
				Trade Instructor								

Date

1. Excellent. 2. Good. 3. Fair. 4. Unsatisfactory. 5. Very Poor.

25.— Permanent Discharge Record Made Out when Pupil Reaches Sixteenth Birthday.

(3 x 5 white card for permanent file.)

PUPIL'S PERMANENT DISCHARGE RECORD.

Name Number

Home Address

Grade last attended Will be 16 Date entered Date of discharge

Reason for discharge

Department last attended	Quality of work in Continuation School	
	Academic	Vocational

Number of months in this department

Entitled to Evening School credits in what subjects?

Total number of hours in Continuation School

Certificated Yes No Remarks

This card filled out legibly in ink on the reverse side, and to the heavy line on this side, comes to the office two weeks before the date of permanent discharge.

26.— Reverse Side of Permanent Discharge Record.

Date.....

RECORD SINCE LAST TRI-MONTHLY REPORT.
(Credit in advance attendance to date of discharge.)

Hours Present.	Absent.	Truant.	Tardy.		Reliability.	Application.	Courtesy.	Neatness.	Arithmetic.	English.	Penmanship.	Vocational Aptitude.
				Academic Instructor								
				Trade Instructor								

1. Excellent. 2. Good. 3. Fair. 4. Unsatisfactory. 5. Very Poor.

Does teacher recommend certification if number of hours is sufficient? Yes. No.

Remarks.....

27.— Certificate to be Given to Pupil on Last Day of his Attendance.

(4 x 6 while card in script type.)

[SEAL]

CITY OF BOSTON.

This is to certify that.....
has been in attendance at the

CONTINUATION SCHOOL

at least one hundred and forty hours and has maintained satisfactory standards in the.....department.

In witness whereof, this Certificate is awarded by authority of the School Committee.

Boston191.....

FRANK V. THOMPSON,
Superintendent of Schools.

Principal.

GENERAL DIRECTIONS ON CONTINUATION SCHOOL ROUTINE.

1. *Teachers' Meeting.*—The monthly teachers' meeting is held about 11.30 a. m. on Wednesday or Thursday of the last full week of each month. Punctual attendance at this meeting is part of every teacher's assignment. If necessary, dismiss classes early enough to guarantee attendance at each meeting.

2. Each teacher should be familiar with the routine procedure of the office and should call at the office post-office box at least once each session. Teachers of outlying classes should call at the office two or three times a week.

3. Each teacher receives a standard note-book cover with class record, Sheet A, enclosed. Keep one sheet for each class and record in it promptly each pupil's record. Rewrite these lists at the end of November and of March. Use the following symbols: Pupil's first entry to class, E; pupil present, check; absent, a; tardy, t; temporarily discharged, d; re-entry after temporary discharge, e, with a horizontal line drawn from d to e, thus: d—e; permanent discharge, D, with the reason for discharge, as, D 16 years, D, left city, etc.; follow-up visit to home, H; to place of business, B.

4. At the close of each class session the teacher makes out a daily attendance slip giving the number of pupils belonging and the number of pupils present in that class. The number of pupils belonging is the number of 257 cards for that class in the teacher's possession. Multiplying the numbers on this daily attendance slip by two or four, according as the teacher held the class for two or four hours, gives the pupil hours belonging and the pupil hours attending for this class. Record these pupil hours on the Sheet A list at the foot of the column for that date. At the end of the month these totals are added and transferred to the monthly report card.

5. At the end of the three-month period add the totals of each pupil's record of pupil hours belonging and attending; enter these with the truancy record, tardy record and pupil's class marks on the trimonthly record slip.

Trimonthly record slips, one for each pupil plainly marked with the pupil's name, the pupil's number, the date and the name of the teacher concerned, are due at the beginning of December and April and at the end of June. A general estimate of the pupil's work is satisfactory except on the last report for that pupil handed in during the year. This last report must be filled out in complete detail. Trimonthly slips, signed by both teachers if two are concerned, when filed at the office, should be arranged in the numerical sequence of pupils' numbers.

6. 257 cards should be arranged alphabetically or by classes. This card becomes active only when the pupil's relation to the class becomes abnormal. Changes of hours, changes of employment, changes of home address are to be promptly entered on this card by the teacher. Whenever this card moves from a teacher to the office the last entry on the back of the card should state clearly why it is moving and should be dated. Where two teachers are handling a group, both 257 cards must come to the office at the same time, each with a reason written on it. *The following rule is to be followed absolutely:*

Have no pupil in your class without a 257 card for him. Have no 257 card in your file without a pupil in regular attendance. A substitute slip for the 257 card is good only for the day and hours specified on it.

7. 256 Monthly Report Card.—Keep one card on hand and on it enter each day memoranda which will be necessary at the end of the month. At the end of the month this will help you to verify your numbers. The footings on your class sheet added together for all your classes will give you all other totals required for the monthly report. The 256 card is to be filled out in every respect, omitting all items after item F on the right-hand side. Note the information required on the reverse of the 256 card where a class changes hands. Be sure to give the dates of teacher's absence, if any. Note whether the absence was for a whole day or half day. Be sure to get your pupil hour numbers under the right heading—general, prevocational or trade extension. This card is to be brought or

mailed to the office at the close of the last school session of each month. The failure of a single teacher to carry out this instruction delays the principal's monthly report and the pay roll of the entire school.

8. In this widely scattered school there is always a chance on a weekly report or a monthly report that a pupil may be counted twice or may not be counted at all. At the end of each week and at the end of each month every 257 card is counted, either in the office or by the teacher. If, for instance, on a Friday afternoon a teacher handed in the count of 257 cards in his possession and immediately took from his box in the post-office some 257 cards, it is obvious that this small number of 257 cards would not be counted either by the teacher or by the office.

9. *Absence and Truancy.*—In store or factory classes teachers can obtain all information from the employment office or the pupil's department. Elsewhere in the school mail an absence postal card on the day of the pupil's first absence. After the second consecutive absence send a "Second Notice" postal card, make out a 92A card and file the 92A card with two 257 cards at the office, at the same time dropping the pupil from the number belonging. In exceptional cases a teacher might wait a few days before issuing the 92A card, but in general the teacher's follow-up work should be so well up to date that there will be little delay in issuing the 92A card.

In general, all routine procedure in the school is carried on by means of cards and slips, the use of which is clearly indicated by the wording on the card. The essential thing for the individual teacher to do is to see that the proper action on his part promptly follows the receipt of each communication. If each teacher's 257 cards are at all times up to date the routine work of the school will proceed without confusion.

10. *Pay Roll.*—Appointed teachers receive their pay for the current month at City Hall on or after the 23d of each month. Per diem teachers receive pay at City Hall for the service of the preceding month on or about the

10th of each month. In certifying to their service on the monthly report, per diem teachers should clearly indicate whether their service is reported in whole days or half days. The salary of a teacher begins with the first day of service and terminates with the last day of service with certain *pro rata* adjustments if the school year has not been completed. Deductions for pension are made from the salary of appointed teachers.

VI.—COURSES OF STUDY.

The following courses of study were prepared by individual teachers and groups of teachers of the Boston Continuation School during the year 1918-19. They are offered as typical and suggestive rather than as standardized and fixed courses. The courses were prepared under the supervision of the Principal and Heads of Division by the following teachers:

HEADS OF BOYS' DIVISION.

John J. Boyan.

Edward M. McDonough.

Entry Class.

Thomas P. Burns.

Joseph H. Gildea.

Machine Shop Department.

George E. Hill.

Thomas Aykroyd.

Ernest W. Anderson.

Frederick A. Dunfey.

Printing Department.

Henry D. Fallona.

Joseph A. Mahoney.

James M. Nelligan.

Electrical Department.

Joseph H. Connors.

Francis R. Sheehan.

Charles O. Halloran.

Charles P. York.

John J. Murray.

Woodworking Department.

Emmett R. Smith.

Stewart J. Shaw.

James F. Crotty.

Sheet Metal Department.

James A. Linney.

John P. Shea.

Mechanical Drawing Department.

Thomas Aykroyd.

Bookkeeping Class.

Mary I. Lynch.

Anne M. Coveney.

Business Practice Class.

James A. Dunbar.

Cornelius G. Cotter.

Rita G. Baker.

Elsie R. Gilbert.

HEAD OF GIRLS' DIVISION.

Grace T. Blanchard.

Entry Class.

Elizabeth A. Keenan.
Louise C. Keyes.

Ungraded Class.

Anna M. Sheehan.

Dressmaking Department.

Mary L. H. Despres.
Grace G. O'Brien.
Teresa A. Tehan.
Julia R. O'Brien.

Power Machine Department.

Louise M. Hall.
Mary H. Stroup.
Effie K. Monteith.
Mary Kelley.

Millinery Department.

Eileen M. Harrington.
Mercedes O'Brien.

Household Arts Department.

Helena M. Dempsey.
Alice McCarthy.

Winifred T. Ormond.

Adeline A. Kanz.
Mary E. McSwiney.
Mary A. Fletcher.

Bookkeeping Class.

Alice J. Healey.
Austina B. Raymond.

Office Routine Class.

M. Jeanette Grady.

Typewriting Class.

Margaret G. Fox.
Esther L. McNellis.

Store Classes.

Alice M. Falvey.
Helen T. Kiggen.

Factory Classes.

Clara H. Franke.
Beatrice C. Blanchard.
Alice D. Murley.
Josephine A. Power.
Elizabeth C. Flynn.

GENERAL INTRODUCTION TO COURSES OF STUDY.

The courses, of which outlines and specimens follow, have evolved by stages from vague, experimental beginnings to a plan that is now being applied with a considerable degree of satisfaction and success.

When the Boston Continuation School came into being, in October, 1914, its problems and possibilities were very uncertain, and courses were necessarily established by borrowing ideas from existing vocational schools, recon-

cing them with the views of the individual instructor, and adapting the whole to the peculiar problems of this type of school. Gradually, however, it became apparent that a new foundation must be established; that while it might be possible to use some borrowed material in constructing courses the plan must be fundamentally peculiar to the Continuation School.

Problems to which courses must be adapted are:

1. Short attendance periods with a week's interval between.
2. Various grades of pupils (academic).
3. Pupils who left school because of a distaste for study and discipline.
4. Pupils who are practically all passing through the period of adolescence and experiencing its peculiar influences.
5. Pupils who have previously been enrolled in pre-vocational schools, regular trade schools or commercial courses and have received some instruction in the subject chosen.
6. Pupils employed in the trade.

Class work is difficult in shop instruction and even homogeneous grouping has such narrow limitations that courses must be designed on the general principle of individual instruction and an individual lesson for each pupil. For this reason some sort of instruction sheet is particularly desirable as it is impossible to give a sufficient amount of oral instruction to each pupil at the exact time he requires it. In all-day vocational schools it has been found desirable to establish the individual project as a unit, blocking the operations of the project in their regular sequence. Owing to the comparatively great amount of time in class, it is possible for the pupil to progress from one project to another within a comparatively short space of time, also giving him an opportunity for the frequent repetition of operations so necessary for proficiency in the trade. This may be accomplished with no excessive tie-up of material or equipment. As each pupil is in class every day all equipment is kept moving.

In the Continuation School, however, each shop cares for from fourteen to twenty classes per week. With the work based on individual projects, only 5 to 7 per cent of the work started would be in motion at any one time and the result would be a tremendous amount of expensive material always idle. Productive work, which is the essence of nearly all successful industrial training, would be impossible, as few commercial jobs could wait the several weeks necessary for their completion.

Therefore shop work instruction in the Continuation School must so far as possible meet these requirements, allowance being made according to the type of shop for variations in the relative importance of the different items.

1. Shop work should be progressive from week to week, the various exercises or projects being presented to the individual pupil in the sequence of their instructional difficulty.

2. While this sequence is preserved so far as possible, yet each week's work must also be a unit in itself.

3. Some exercise work is necessary, especially at the beginning of the pupil's shop experience, but so far as possible, work should be on projects which have a personal interest to the pupil and which result in the production of articles which have a commercial value and meet a commercial standard of excellence.

The accompanying courses are based upon a series of principles, each embodying one or more operations, nearly all of which are repeated frequently in dealing with other principles throughout the course. This frequent repetition is absolutely necessary to success, as an operation learned but never repeated is soon forgotten.

GENERAL ENGLISH. (ELEMENTARY.)

I. Oral English.

1. Development of the following essential elements in good speech.

1. Ease in expression of thought.

Free discussions in class based on

- a. Personal experiences.
- b. Current events.
- c. Civics and hygiene.

d. Business opportunities.

e. Book reports.

Much outside reading encouraged, the teacher aiding in the choice of books, by furnishing each pupil with a list of books. Books frequently read and discussed in class.

2. Pronunciation and clear articulation.

Frequent drill on words commonly mispronounced.

3. Enlarged vocabulary.

a. Developed through reading.

b. Special exercises for enlarging vocabulary.

Ex.— Lists of words on business terms, dry goods, railroad terms, postal service, trades, etc., placed on blackboard, discussed and used in sentences.

4. Correction of errors of speech.

Emphasis placed on

a. Pronouns.

(1) Case of after the verb "be."

(2) Misuse of nominative in compound elements
(*ex.*— between May and I).

(3) Agreement with antecedent.

(4) Correct use of who and whom.

b. Verbs.

(1) Drill in irregular verbs.

Provide a list of about 24 verbs commonly misused. Review principal parts and use each verb in short sentence in present, past and present perfect.

(2) Agreement between verb and subject.

c. Discrimination between adjectives and adverbs.

Ex.— She plays *well* (not good).

She feels *bad* (not badly).

d. Double negative.

II. Written English.

1. Drill on technicalities required in written work.

a. Capitalization.

b. Punctuation.

(1) Use of the period.

After abbreviations.

After declarative and imperative sentences.

(Guard against writing parts of sentences as if they were complete thought. Guard against combining two complete sentences into one.)

(2) Use of the comma.

(a) Words in a series.

(b) A dependent clause standing first in sentence.

(c) Explanatory phrases and clauses (non-restrictive).

(d) Name of the one addressed.

(e) Parenthetical expressions.

- (3) Use of interrogation point and exclamation point.
- (4) Use of the apostrophe.
 - (a) To indicate possessive case of nouns (*not* pronouns).
 - (b) Contractions.
 - (c) Plural of letters and figures.

2. Spelling.

A few simple rules as:

Doubling final consonant before a termination.

Dropping final *e* before a termination.

Nouns ending in *y* preceded by consonant.

i after *l*; *e* after *c*.

Common prefixes and suffixes.

Special drill on words commonly misspelled.

3. Composition.

- a. Develop paragraph idea.
- b. Exercises to improve sentence structure, with emphasis on following points:
 - (1) Avoid long, rambling sentences connected with "and."
 - (2) Avoid short, choppy sentences.
 - (3) Improve sentences by substituting dependent clauses or participial phrases to subordinate ideas of minor importance.
 - (4) Do not crowd into one sentence items but remotely related.
 - (5) Be careful to place modifying words or phrases near the words they modify.
- c. Letter writing.
 - (1) Drill on form of a social letter.
 - (2) Frequent readings from such books as "Daddy Long Legs" to develop fluency and ease in letter writing.

GENERAL ENGLISH. (ADVANCED.)

ENGLISH I.

I. Oral Work.

1. Object.

To help pupil to express himself clearly and coherently, with a view to applying such ability in business.

2. Material.

- a. Current events.
- b. Newspaper articles and editorials.
- c. Short stories.
- d. Book reports.
- e. Debates.
- f. Practical exercises in exposition, everyday directions.

II. Spelling and Word Study.

- a. Business terms.
- b. Words often misspelled.

- c. Common prefixes and suffixes.
- d. Some common roots.

III. Grammatical Principle and Diction.

- 1. Review parts of speech.
- 2. Nouns.

Formation of plurals.

I. Exceptions.

- a. Nouns in *o*.
- b. Nouns in *y*.
- c. Nouns in *f*.
- d. Plurals in *en*.
- e. Plurals formed by inward change.
- f. Plurals of compound nouns.
- g. Plurals of letters, figures and symbols.

3. Pronouns.

Case:

I. Of personal pronouns.

- a. Drill in use of nominative case.
 - (1) As compound subject.
 - (2) As subject of elliptical sentence.
 - (3) As predicate noun.
- b. Drill in use of objective case.
 - (1) As compound object.
 - (2) As compound object of preposition.
- c. Drill in use of possessive case.
 - (1) With "ing" form.
 - (2) Correct use of "its."

II. Of relative pronouns.

- a. Drill in use of nominative when descriptive clause intervenes between subject and verb.
- b. Drill in use of objective.
 - (1) When object is separated from verb.
 - (2) When object is separated from preposition.

III. Of interrogative pronouns.

- a. Drill especially in use of **objective**.

4. Verbs.

Number:

- a. Singular verb, singular subject.
- b. Plural verb, plural subject.
- c. Subject singular in form, plural in sense. (Half of them *are* gone.)
- d. Subject plural in form, singular in sense. (Gulliver's Travels was written by Swift.)
- e. Two singular subjects taken as one whole. (Bread and butter *is* what I prefer.)
- f. Two singular subjects taken together. (Tom and his sister *were* there.)
- g. Two singular subjects considered separately. (Neither Fred nor his sister *was* there.)

Diction.

1. Value of a good vocabulary.
2. Means of improving and enlarging.
 - a. Some common errors corrected:
 1. Troublesome verbs.
lie, lay, rise, rose, sit, set.
 2. Distinction between adjective and adverb. Use of adjective after look, taste, feel, smell and appear.
 3. Words which resemble each other.
There, their. Council, counsel. Emigrate, immigrate. Statue, statute, stature. Continual, continuous. Affect, effect. Accept, except.
 4. Words which are misused.
Bring, take, carry, fetch. Shall, will. May, can. Affect, effect. Accept, except. Like, as.

IV. Capitalization and Punctuation.

1. Review of general rules.
2. Emphasize use.
 - a. Of comma, in phrases and clauses, and in compound sentences.
 - b. Of colon and semi-colon.
3. Drill by means of rough draft.

V. Letter Writing.

1. Business letters.
 - a. Value.
 - b. Elements.
 - c. Parts.
 - d. Kinds.
 - Letters of application.
 - Letters of recommendation, introduction.
 - Letters ordering goods.
 - Letters acknowledging receipt of order.
 - Letters of inquiry and information.
 - Letters requesting payment.
 - Letters of complaint and adjustment.
 - Circular letters.
 - The day's mail.
2. Friendly letters:
 - Notes.
 - Examples of famous letters to develop style.

VI. Literature.

1. Class discussion and reading of selected books.
2. Reports on assigned reading.

ENGLISH II.

For Pupils Who Have Had the Equivalent of High School English I.

1. Oral work. (35 lessons.)

Aim.

- To overcome self-consciousness and reticence.
- To acquire courtesy of tone, words and manner.

To develop power to organize thoughts.

To abolish slang.

To increase grammatical accuracy.

To develop self-expression and the power to make an impression.

Specimen topics.

1. Current events.

a. Chief points of covenant of League of Nations discussion.

b. Report of Wilson's speech at New York.

c. Report of Taft's speech at New York.

d. Report of Senator Lodge's speech.

Discussion — Civics topics.

Senate.

Number of senators.

Names of Massachusetts senators.

Power of senate.

e. Discussion of League of Nations.

Arguments for League.

Arguments against League.

2. Book reports.

Aim.

To develop in the pupils an inclination to gain and profit in good literature.

To form the habit of reading in leisure hours.

A suggestive list:

a. Industrial novels.

John Halifax.

Ramona.

Silas Marner.

David Copperfield.

b. Historical novels.

The Spy.

Crisis.

Ivanhoe.

c. Biography.

Boy's Life of Edison.

Autobiography of Theodore Roosevelt.

Astoria.

d. Fiction.

Tom Sawyer.

Penrod.

Little Shepherd of Kingdom Come

Treasure Island.

2. Corrective work. (35 lessons.)

1. Drill work.

a. Drill on pronouns.

b. Drill on who and whom.

c. Unity in number after "each," etc.

d. Correct prepositions after certain words.

2. Study of synonyms.

Specimen lesson.

Discover shade of difference:

grand, imposing, splendid, impressive.

guess, think, suppose, imagine.

genuine, authentic, real, true, pure.

3. Word study.

Specimen lesson.

teach, affect, emigration,

learn, effect, immigration.

3. Business correspondence. (Individual work.) (35 lessons.)

1. General subject-matter.

a. Mechanics of letter writing.

b. Letter of application.

c. Subscription for magazine.

d. Ordering goods.

e. Acknowledgment of order.

f. Enclosure.

g. Credit letters.

h. Letter of complaint.

i. Letter of adjustment.

j. Letter asking information.

k. Collection letters.

l. Letter of introduction.

m. Letter of recommendation.

n. Sales letters.

o. Advertising.

p. Telegrams.

4. Divisions of lessons on business correspondence.

A. Mechanics of letter writing.

Lesson 1.—Qualities of good writer.

Requisites for business correspondence.

Lesson 2.—Heading of letter.

Uses of titles.

Lesson 3.—Complimentary address.

Complimentary close. Salutation.

Lesson 4.—Addressing envelopes.

Folding letters.

Lesson 5.—Abbreviations of states.

Lesson 6.—Abbreviations of important commercial terms.

B. Study of letter of application.

Lesson 7.—Study of model letters.

Lesson 8.—Write letter of application (own experience).

Lesson 9.—Criticism and rewrite.

Lesson 10.—Answer advertisement.

C. Blacklist.

Lesson 11.—Words and expressions to be avoided.

Lesson 12.—Improved forms.

a. For opening letters.

b. For closing letters.

D. Form letters.

Lesson 13.—Subscription for magazine.

- Lesson 14.— Ordering goods.
 - a. Order with check enclosed.
- Lesson 15.— Order.
 - a. Not send check — ask for credit.
- Lesson 16.— Acknowledgment of order.
 - a. Welcome new customer.
- Lesson 17.— Enclosure.
 - a. Check.
- Lesson 18.— Acknowledgment of payment.
- E. Credit letters.
 - Lesson 19.— Looking up credit (postpone order).
 - Lesson 20.— Refusing credit.
- F. Letter of complaint.
 - Lesson 21.— Model letters.
 - Write letters (own experience)
 - Lesson 22.— Revise letters.
- G. Letter of adjustment.
 - Lesson 23.— General principles.
 - Model letters.
 - Lesson 24.— Answer 21.
- H. Letter asking information.
 - Lesson 25.
- I. Letters giving or refusing information.
 - Lesson 26.
- J. Collection letters.
 - Lesson 27.— Principles involved.
 - Classes of customers.
 - Model letters.
 - Lesson 28.— Outline of the follow-up series.
 - First letter.— The stage of notification.
 - Lesson 29.— Second letter.— The stage of reminder.
 - Lesson 30.— Third letter.— The stage of discussion.
 - Lesson 31.— Fourth letter.— The stage of urgency.
 - a. The attorney.
 - Lesson 32.— Letter to collect club dues.
- K. Letter of introduction.
 - Lesson 33.
- L. Telegrams.
 - Lesson 34.— Rules concerning.
 - Write.
 - Lesson 35.— Condensing messages for telegrams.

ENGLISH III.

English III develops more fully the subject-matter of English II. Also enlarges very much on the literature and oral composition.

1. Letters asking information.
 - Lesson 1.
2. Letters giving and refusing information.
 - Lesson 2.
3. Letter of application.
 - Lessons 3 and 4.

4. Sales letters.

Lesson 5.— Study of sales letters.

Object. Read models. Principles. Make an outline.

Lesson 6.— Read and criticise letters brought in by class.

Lesson 7.— Gathering material.

Discuss "talking points" about articles pupils are familiar with.

Lesson 8.— Art of securing attention.

Write "opener."

Lesson 9.— Arousing interest and holding it.

Write descriptive paragraph for interest.

Lesson 10.— How to create desire.

Write persuasive paragraphs.

Lesson 11.— The close. How to get action.

Write "clincher."

Lesson 12.— Write sales letter for article pupil is familiar with.

Lesson 13.— Write a sales letter for a business correspondence school.

5. Advertising.

Lesson 14.— Relation to sales letters.

Kinds of advertising.

Classes of products.

Motives for buying.

Lesson 15.— Writing advertisements.

Condensing sales letters.

Rules for writing.

Headlines.

Lesson 16 and Lesson 17.— Writing advertisements.

6. Letter of introduction.

Lesson 18 and Lesson 19.— Study of model letters.

Make an outline.

Write.

Read and criticise.

7. Letter of recommendation.

Lesson 20.— Kinds.

General.

Personal.

8. Letter ordering goods.

Lesson 21.

9. Letter of acknowledgment.

Lesson 22.

10. Answering the morning mail.

Lessons 23 to 35.

(Letters are given to pupils to be answered. Suggestions are given which will determine the nature of the answer.)

GENERAL ARITHMETIC.

The work in general arithmetic is mainly to help the child retain his knowledge of fundamentals and to show him the application to business and individual life. The work is grouped according to the ability of the child and graded high, medium and low for each class, so that the same principles may be taught to everyone but each one may have work according to his ability.

Time allotment: Thirty to forty-five minutes per week.

Thirty-five lessons.

- I. Writing and reading numbers.
- II. Four processes.
 1. Addition.
 2. Subtraction.
 3. Multiplication.
 4. Division.
 - a. Combination of numbers to 100.
 - b. Mental drill for alertness.
 - c. Checking results.
 - d. Problems.
- III. Practical application of every process.

Fractions.

 1. Common.

Four processes. Simple fractions.
 2. Decimal.

Aliquot parts.
United States money.
Percentage as a review of fractions.
- IV. Mensuration.

Linear measure.
Fractional parts of the yard in feet.
Perimeter.
Areas.
Length and width. Example, utility box.
- V. Treatment of denominate numbers. Four processes.
- VI. Percentage.
 1. Interest.

Simple and compound.
Months, days and years.
 2. Discount.

Trade purposes.
 3. Insurance.

Life.
Fire.
Accident.
Property.
 4. Taxes.

Property.
Income.
- VII. Computation.
 1. Budget.
 - a. Personal.
 - b. Household.
 2. Savings.

Postal.
Bank accounts.
Government bonds.
Investments.
Real estate.
War Saving Stamps.

GENERAL COURSE IN HYGIENE.

The course is taken up with the following as section headings:

- A. The pupil in relation to himself.
- B. The pupil in relation to the home.
- C. The pupil in relation to the employer.
- D. The employer in relation to the pupil.
- E. The pupil in relation to the community.
- F. Public hygiene.
- G. Safety first on the job.

The aim in teaching hygiene is to have the pupil see the importance of good health to himself, his family and the community in which he lives. Also to impress upon him the fact that good health means more to him than anything else he could possess and that without it he cannot hold employment long and his earning power is thereby lessened.

HYGIENE.

A. THE BOY IN RELATION TO HIMSELF.

1. Ready for the day's work.
 - a. Arise in plenty of time so as to have time enough to wash, eat and be on time at your work.
 - b. Place bedclothes over foot of bed to air bed and clothes and leave window open.
 - c. Dress.
 - d. Remove wastes from body.
 - e. Wash hands with warm water and soap.
 - f. Clean finger nails.
 - g. Wash face, neck, ears and hands.
 - h. Brush teeth.
 - i. Comb the hair.
 - j. Eat a good breakfast.
 - k. Wash hands and face.
 - l. Brush teeth.
 - m. Dress for outdoors and depart for work. Walk to work if possible.

Some Health Rules.

1. Keep all parts of the body clean.
2. Keep the mind clear and clean.
3. Breathe fresh air.
4. Avoid drafts.
5. Exercise regularly.
6. Take long walks when possible.
7. Sleep at least eight hours.
8. Drink freely of water.
9. Eat enough.
10. Work without worry.
11. Avoid dark, damp, dingy rooms.
12. Avoid eye strain.
13. Do not spit except into proper receptacles.
14. Let alcohol and tobacco alone.
15. Value the sunlight.
16. Keep the feet warm and dry.

17. Dress properly for the season at hand.
18. Shield against the coughs and sneezes of others and be careful of your own.
19. Avoid crowds during disease epidemics.
20. Wash hands and face before eating.

Eye.

Its use and protection — its care — eye strain.
Some eye diseases.
Normal refraction.
Farsightedness.
Nearsightedness.
Astigmatism.
Bad effects of a too dim or a too bright light.
Talk on eye washes.
Borax and boracic acid in washing.
Where the eyes may be treated free in Boston.
Eyeglasses.
Goggles and their use in some kinds of work.

Ear.

Use and protection.
Sad effects of a broken eardrum.
Danger of solid objects, like pins, needles, etc., to remove wax.
Effects of loud noises in shop on hearing.
Effects of blows on the ear.

Nose.

Its use and care.
Entrance for dust and germs.
Nose bleed — treatment.
Tonsils and adenoids.

Teeth.

First or temporary set — 20.
Second or permanent set — 32.
Parts of a tooth.
Cause of decay — lack of care, injury, tartar, nails and other objects in mouth.
Toothache and what it means. How to prevent it.
Temporary fillings.
Correct use of toothbrush — dental floss.
Tooth preparations — good and bad ones. How to make your own.
Care and inspection of teeth and gums by dentist.
Avoidance of the so-called "low priced" and "painless" advertising establishments.
Treatment at Forsyth Dental Infirmary, Boston.

Hygiene of the Skin.

Use of the skin.
Perspiration.
Bathing.

Soaps.

The skin in relation to clothing.

Hair.

Its use and care.

Talk on hair preparations.

Pediculosis — how to get rid of. Danger to others.

Sanitary barber shops.

Hands.

Their care — washing before and after meals.

Chapped hands — cause and treatment.

Clean and well kept nails.

Warts and their careful removal.

Feet.

Bathing.

Proper fitting shoes.

Corns, bunions and ingrowing nails.

Feet and dampness.

Wearing of rubbers — need of, but not indoors.

Blood and Its Circulation.

Composition of blood.

Heart, arteries, capillaries and veins.

Bleeding and how to stop it.

Blood clotting.

Blood poisoning.

Respiration.

Need and process of respiration.

Nose and mouth breathing.

Windpipe.

Larynx — vocal cords.

The lungs — use, blood vessels, of the lungs.

Diseases of lungs — employments favorable to disease.

Chest or thorax.

Diaphragm.

Capacity of lungs.

Lung exercise and deep breathing.

How to restore respiration.

Use of respirators.

Value of correct posture.

Ventilation.

Need of ventilation.

How rooms are ventilated.

Evils of indoor life — need for fresh air.

Composition of air by volume.

Composition of expired air.

Hygiene of Digestion.

Sense of taste.

Process of digestion and action of each organ on food as it passes from mouth to small intestine.

Regular habits of eating.

Digestibility of foods.

a. Foods easy to digest.

b. Foods difficult to digest.

Classification of foods.

Composition of foods.

Beverages.

Condiments.

Foods for the sick.

The lunch box and its contents.

Impure foods.

Hygiene of the Muscles.

Effects of muscular activity.

Forms of exercise.

Value of exercise.

Playgrounds and parks.

Hygiene of Nervous System.

Kinds and use of nerves.

Sleep — proper amount.

Activity of nervous systems.

Connection of body with brain and mind.

Two kinds of tired feelings.

Source of pain.

Headaches — cause.

Effect of alcohol on nervous system.

Effect of tobacco on nervous system.

Hygiene of Skeleton.

Nourishment of bones.

Broken bones.

Dislocations — sprains.

Acquired deformities.

Correct positions of sitting, standing and walking.

Nutrition of bones.

Hygiene of Temperance.

Stimulants and narcotics.

Meaning of fatigue.

Alcohol is a whip and not a food.

How stimulants arouse energy.

Natural stimulants.

Alcohol and disease — effects of alcohol.

Drug Habits.

Patent medicines.

Cough cures.

Headache powders.

Tobacco and cigarettes.

Clothing.

Use of clothing.
 Woolen clothing.
 Cotton clothing.
 Linen clothing.
 Silk clothing.
 Rubber clothing.
 Clothing and climate.
 Bad effects of too much or too heavy clothing.
 Bad effects of too little or too light clothing.
 Clothing and its relation to disease.
 Clothing for the street and for the job.
 Tight-fitting clothing.

First Aid.

Falls, burns and accidental poisoning.
 Shock, sprains, bruises and breaks.
 Wounds, cuts, bleeding and bandaging.
 Injuries to ear, eye and nose.
 Electric shock.

B. THE BOY IN RELATION TO HIS HOME.

What the parents should provide for the boy.

1. A sanitary home.
2. Well prepared and nourishing food.
3. A clean room and a good bed to sleep in.
4. His own towel, face cloth, comb, brush, toothbrush and soap.
5. A place to keep clothing away from kitchen odors and dust.
6. Proper medical care when sick.

What the boy owes to his parents.

1. A clean life for the protection of the rest of the family.
2. Keeping all articles used in common in a neat, orderly and sanitary way.
3. Care of clothing and articles brought into house so that obnoxious household insects will not be introduced.
4. Avoidance of alcoholic drinks, drugs, etc., worry for which might be the cause of ill health to parents.
5. Being careful so that accidents will not maim him and break the parents' pride in their "perfect specimen."

C. THE BOY IN RELATION TO HIS EMPLOYER.

Should obey all warning and safety signs.
 Obey the good spitting law.
 Report accidents and help prevent them.
 Help to keep all sanitary places sanitary.

D. THE EMPLOYER IN RELATION TO BOY.

Should provide healthful working conditions.
 Should use all practical safety devices.
 Should give proper time for lunch and rest.
 Should have bubblers with cool water.

Should have clean, sanitary arrangements.

Should have a good system of lighting, heating and ventilation.

Provide clean floors.

Should provide for care of accidents.

(See bulletin of Massachusetts Industrial Accident Board.)

E. THE BOY IN RELATION TO HIS COMMUNITY.

1. Location of homes.

A. Healthful or unhealthful; causes of unhealthful homes; unsafe construction; unsanitary condition; lack of water; lack of drainage; poor sewerage arrangement.

2. Yards about homes.

Poor drainage; lack of receptacles for garbage, ashes, cans and other rubbish.

3. What the above conditions cause.

Foul air; dark and damp rooms; fire risks; accidents; fly nuisance; mosquito nuisance; disease and death.

4. Healthful community.

What makes it such.

Clean, well kept streets; absence of papers, rubbish, garbage or broken glass on streets or in yards; observance of spitting laws; well built houses; no over-crowded tenements; proper plumbing and drainage; sufficient lighting and heating; coöperation with all health authorities; civic pride to remain healthy.

5. Public hygiene.

Water and water supply.

Uses of water; sources; rain or snow; surface; ground or subsoil; artesian well. Common sources of pollution and their correction; diseases transmitted through water; detection of pollution by inspection, bacteriological examination, chemical examination. Purification of water.

Milk.

Composition of milk; ferments in milk; importance of wholesome milk; visible dirt in milk; invisible dirt in milk,—bacteria. Sources of bacteria in milk; comparison of milk and water; clarified milk; pasteurized milk; inspected milk; clean milk for babies.

Milk as a carrier of disease.

Typhoid and milk; tuberculosis and milk; septic sore throat and milk; scarlet fever and milk; diphtheria and milk.

Adulteration of milk.

How to secure a good milk supply.

Dairy inspection, etc.

The milk bottle vs. the can. Milk in the store; best way to preserve milk; care of milk in the home; the fly question and milk.

6. Board of Health.

State and city boards.

Importance of.

Some regulations of health boards and work done by them: Drainage, vaults and cesspools; cleanliness of houses and premises; house offal; stables and animals; disease regulations; deaths, burials and cemeteries; dairy inspection; food and drug inspection; bacteriological laboratory.

7. Diseases.

Cause of disease, bacteria, protozoa; immunity from disease; natural, artificial. What is a contagious disease? What is an infectious disease? What is an occupational disease?

A. Tuberculosis? What is tuberculosis? Cause of; germ discovered when and by whom? Things favorable to growth; things unfavorable to growth. What it does. How it is spread; sputum, milk, food, etc. Early signs: How prevented; how cured if taken in time. Fake cures. The campaign against consumption in Massachusetts. Exhibits, lectures, hospitals for patients.

B. Other diseases of great importance.

Malaria, cause — anopheles mosquito; prevention; use of quinine.

Typhoid.

Milk, water and food factors in spread. The fly and typhoid. Use of disinfectants.

Colds and their prevention.

Cause and cure. Colds may lead to grippe, bronchitis, pneumonia or tuberculosis.

Influenza.

Spread by close contact: Symptoms; precaution, go to bed immediately and send for doctor.

8. Some common dangers the public may come in contact with:

Common drinking cup and towel (now a law to prevent them); door knobs; car straps; public handles and other appliances; patent medicines; quacks.

9. Animals and their part in spread of disease:

Dogs; cats; rats and mice.

Means of riddance or control — traps, poison, etc.; rat campaigns in Boston.

10. Insects as pests.

Fly.

Where fly breeds; life history.

Means of control: Screens, traps, fly campaigns.

Mosquitoes.

Where found; life history.

Means of control: Oiling of ponds, filling in drains, covering rain barrels, screens, mosquito campaign.

The work of the United States Government in Cuba in 1901; in New Orleans in 1905; in Panama. Mosquito campaigns in Brookline since 1901.

11. Other insects or other pests that may spread disease or cause other damage:
 Bedbug; cockroach; clothes moths; ants; house crickets; house centipede; fleas and lice.
 Their cause and riddance.
 Coöperation of all families in infested houses for their riddance.
12. Sanitary disposal of wastes:
 Garbage; ashes; rubbish; cans, etc.; drains; sewage, etc.
13. Disinfection:
 Need of natural disinfection; light; drying and heat; chemical disinfection; false ideas in regard to disinfection.
14. Quarantine:
 Need of measures taken for effective regulations regarding it.

GENERAL COURSE IN CIVICS.

Training in citizenship is the most important single function of the Continuation School. Every pupil receives instruction in this subject. In so far as the discussion and consideration of formal topics are of value, the following outline is used. Each topic is a unit in itself, and there is also a progression in the topics. But at every point of contact which the pupil has with the school, good citizenship is emphasized. It will be noted that the outline course is designed not so much to give the pupil information on the machinery by which government is administered, as it is to make him think and act properly in the relations which affect him as a young worker and a youthful member of his community.

A most effective means of giving instruction in civics is to bring all the pupils together in an assembly hall where they can be addressed by good speakers who have intimate knowledge of commercial, industrial and civic conditions.

Training in citizenship implies also training in the proper and profitable use of leisure, in recreation which is at the same time healthful and helpful. The school assembly hall, the school gymnasium, public parks and playgrounds all are effective in helping to make good citizens.

- I. Government and law.
 - a. Government.
 1. Meaning.
 2. Necessity.
 - b. Laws.
 1. Meaning.
 2. Purpose.
 3. Duties of citizens regarding laws.
- II. The government of self.
 - a. Self-control.
 - b. Vices and virtues of the youth.
 - c. Value of good companionship.
 - d. Strengthening of the youth's will power.
 - e. Advantages of good surroundings.
 - f. Advantages of doing right.
- III. The foundation of all government.
 - a. Character of government depends upon character of citizens.
 - b. Good government begins with person himself.

- IV. The family.
 - a. The bed rock of society.
 - b. The authority and duties of parents.
 - c. Influence of parents upon the conduct of their children.
 - d. Love and duty towards all of their kin.
 - e. Debt of children to their parents.
- V. Duties of parents to children.
 - a. Support until twenty-one years of age.
 - b. Reasonable amount of education.
- VI. Right of parents or duties of children.
 - a. Obedience of children.
 - b. Helpfulness.
 - c. Partial support.
 - d. Children must assist parents who are helpless.
- VII. The school.
 - a. Relation to the home.
 - 1. Coöperation.
 - b. Government of schools.
 - 1. School Committee, superintendent, master, teacher.
 - c. Rules that must be obeyed.
 - d. The teacher.
 - 1. Duties.
 - e. The pupils' duties.
- VIII. Community welfare.
 - a. Social service on the part of the youth.
 - b. Duties towards neighbors.
 - 1. Helpfulness to those less fortunate than himself.
 - 2. Pride in appearance of home and neighborhood.
 - 3. Spirit of industry.
 - (a) Evils of idleness.
 - (1) Street corner loafing.
 - (b) Advantages of being busy.
- IX. Development of the Port of Boston.
 - a. Necessity.
 - 1. Accessibility for importation of raw materials for our numerous factories.
 - 2. To export finished products.
 - b. Advantages.
 - 1. Larger factories.
 - 2. Greater population.
 - 3. Stimulated business activity.
 - 4. General prosperity.
 - 5. Lower prices for commodities.
- X. Relations existing between employer and employee.
 - a. Employee's duties towards employer.
 - b. Qualities of a good employee.
 - c. Advantages of conscientious work on the part of the employee.
 - d. Faithfulness to distasteful duties.
 - e. Proper spirit in working.
 - 1. Motive.

- XI. Relations of employee to his fellow workers.
 - a. Value of harmony amongst fellow workers.
 - b. Helpful coöperation.
 - 1. Willingness to help other employees.
 - 2. Realization of importance of each man's part.
 - c. Fair play.
- XII. Citizenship.
 - a. Meaning of word "citizen."
 - b. Aliens.
 - c. Naturalization.
 - 1. Meaning.
 - 2. Conditions.
- XIII. Advantages of citizenship.
 - a. Enjoyment of political rights.
 - b. Enjoyment of civil rights.
 - c. Enumeration and thorough study of the above.
- XIV. Duties of citizens.
 - a. Obedience to the law.
 - b. Defense of one's country.
 - c. Industry.
 - d. Attention to public affairs.
- XV. How citizens can help the fire department.
 - a. 'An ounce of prevention is worth a pound of cure.'
 - b. Danger of bonfires.
 - c. Danger from fireworks.
 - d. Care of matches.
 - e. Proper care of gas.
 - f. Careful use of inflammable fluids.
 - 1. Alcohol, kerosene, benzine, naphtha, etc.
 - g. Proper time for handling these fluids.
 - h. Danger of having rubbish in cellar.
 - i. Fire escapes.
 - j. Knowledge of workings of fire alarm.
 - k. Obedience to the firemen's orders.
 - l. Ringing of alarm only in time of necessity.
 - m. Obedience to underwriters' laws.
- XVI. How citizens can help the police department.
 - a. Obedience to all laws.
 - b. Reporting of crime.
 - c. Reporting of accidents.
 - d. Helpfulness of good clubs.
 - e. Helping to maintain order, doing what the law requires, and keeping from doing what the law forbids.
- XVII. How citizens can help the street cleaning department.
 - a. Due regard for appearance of public property.
 - b. Value of civic clubs.
 - c. Juvenile street cleaning leagues.
 - d. Proper use of rubbish cans.
- XVIII. How citizens can help the health department.
 - a. Obedience to sanitary laws.
 - b. Cleanliness of body.
 - 1. Frequent bathing.

- c. Keeping clothing and home clean.
- d. Free use of fresh air and sunlight.
- e. Reporting to health department of any contagious disease in neighborhood or unsanitary conditions.

XIX. Public safety.

- a. "Safety First."
- b. Care in crossing streets.
- c. Care in passing buildings in the process of construction.
- d. Duties of citizens in regard to icy pavements.
- e. Sidewalks to be kept clear of dangerous obstructions.
- f. Duties of property owners regarding safe conditions of their property with reference to passers-by.
 - 1. Loose blinds, loose chimneys, loose fences, loose window panes, etc.

XX. Building commissioners.

- a. Duties regarding public property, private dwellings, factories, theatres, churches and schools.

XXI. Public park department.

- a. Benefits derived therefrom.
- b. How a citizen can assist in care of plants, trees, shrubbery and park property.

XXII. Public recreation.

- a. Proper supervision.
 - 1. Social centers.
 - 2. Playgrounds.
 - 3. Gymnasiums.
 - 4. Bath houses.

XXIII. Local government in New England.

- a. Beginning of town government in New England.
- b. Authority of state Legislature to prescribe forms of local government.
- c. The town meeting.

XXIV. Government of Boston.

- a. Earliest forms of government.
- b. City charter in 1822.
 - 1. Authority of Legislature.
- c. New city charter of 1909.
 - 1. Provisions.
- d. City departments.

XXV. Machinery of the city election.

- a. Nomination.
 - 1. Eligibility of candidates.
 - 2. Method.
 - (a) Nomination papers.
 - 3. Conditions.
 - (a) Names of at least 5,000 regularly qualified voters filed with election commissioners.
- b. The ballot.
- c. The election.

- XXVI. Self-government of the people.
 - a. Direct.
 - 1. By people themselves meeting together.
 - b. Representative.
 - 1. By people through representatives.
 - c. Importance of the rule of the majority in this country rather than the minority.
- XXVII. The threefold departments of government.
 - a. Legislative.
 - b. Executive.
 - c. Judicial.
- XXVIII. The government of Massachusetts.
 - a. The beginning of colonial government.
 - b. Beginning of state government.
 - c. The present form of state government.
 - 1. The Constitution.
 - 2. Method of amendment.
- XXIX. Operation of the state government.
 - a. Legislative department.
 - b. Executive department.
 - c. Judicial department.
 - d. The state election.
- XXX. Lawmaking or legislative department.
 - a. Power to make laws.
 - b. Checks on the lawmaking power.
 - c. Restrictions on the Legislature by the people.
 - d. Influence of public opinion.
- XXXI. Executive department.
 - a. The Governor.
 - b. The heads of departments.
 - c. Powers of the Governor.
- XXXII. The judicial department.
 - a. District courts.
 - b. City and county courts.
 - c. Supreme Court.
 - d. Appointments of judges.
- XXXIII. The Government of the United States.
 - a. Beginning of national government.
 - 1. The Constitution.
 - b. The present form of national government.
 - c. The operation of the national government.
 - 1. The work and duties of the various departments.
- XXXIV. Congress.
 - a. House of Representatives.
 - 1. How chosen.
 - 2. Powers.
 - 3. Number.
 - b. The Senate.
 - 1. How chosen.
 - 2. Powers.
 - 3. Number from each state.

XXXV. The national election.

a. The President.

1. How elected.
2. Term of office.
3. Powers.

A TYPICAL PROGRAM COVERING THIRTY WEEKS' WORK.

A GIRLS' DRESSMAKING CLASS.

The allotment of time is as follows:

Arithmetic — 45 minutes.

Hygiene — 15 minutes.

Civics — 15 minutes.

English — 30 minutes.

Reading to the class for recreation and to cultivate a taste for books — 10 minutes.

Patterns or materials — 5 minutes.

1. Arithmetic.— Oral and written problems involving the four fundamental processes.

Hygiene.— Bathing and clean clothing.

Civics.— The successful girl.

English.— Spelling.

Oral and written discussion of some memory gems.

2. Arithmetic.—Bills.

Hygiene.— Care of the skin.

Civics.— Boston — its history.

English.— Letter applying for a position.

3. Arithmetic.— Quick oral work in the four fundamental processes. Bills continued.

Hygiene.— Care of the hair.

Civics.— Educational advantages in Boston.

English.— Spelling.

Review letter applying for a position.

4. Arithmetic.— Problems involving addition of fractions.

Hygiene.— Care of the hands and nails.

Civics.— Use of spare time.

English.— Spelling. Letter to employer explaining absence.

5. Arithmetic.— Problems involving addition and subtraction of fractions.

Hygiene.— Morning inspection.

Civics.— Value of keeping to one job.

English.— Spelling. Composition. "The Successful Girl."

6. Arithmetic.— Problems involving addition and subtraction of fractions.

Hygiene.— Fatigue.

Civics.— Interest in one's work. Think about the materials, where they come from, etc.

English.— Spelling match.

Discussion.— Advantages of city life over country life, and *vice versa*.

7. Arithmetic.— Oral and written problems in multiplication of fractions.

Review fractional parts of a dollar.

Hygiene.— Colds.

Civics.— Systematic saving.

- English.— Spelling. Dictation. Rewriting a hectograph story, using better sentences.
8. Arithmetic.— Problems involving addition, subtraction and multiplication of fractions.
 Hygiene.— Food values — special reference to lunches.
 Civics.— Respect for public property: Care of library books, etc.
 English.— Spelling. Dictation. Correction of hectograph papers containing common errors.
9. Arithmetic.— Shopping problems.
 Hygiene.— Use of lunch time.
 Civics.— Thoughtfulness, as shown towards older people, employer and in the home.
 English.— Hectograph language papers.
 1. Correction of common errors.
 2. Use of may and can.
 3. Writing a composition on either subject:
 The books I like to read.
 My first day at work.
10. Arithmetic.— Problems involving division of fractions.
 Hygiene.— Care of the teeth.
 Civics.— Conduct on the street and on street cars.
 English.— Using parts of irregular verbs in sentences.
 Writing a letter acknowledging the receiving of a gift.
11. Arithmetic.— Oral and written problems involving addition, subtraction, multiplication and division of fractions.
 Hygiene.— The clean house.
 Civics.— Making of friends.
 English.— Spelling. Hectograph papers requiring the use of don't or doesn't and to, too, two.
12. Arithmetic.— Oral work in finding 10 per cent discount. Written work involving whole numbers and fractions.
 Hygiene.— Morning inspection.
 Civics.— Use of spare time and forms of recreation.
 English.— Spelling. Dictation.
 Oral discussion of dictation exercise.
13. Problems involving fractions and discount.
 Hygiene.— Review lesson on personal cleanliness and morning inspection.
 Civics.— Continue forms of recreation.
 English.— Spelling. Hectograph papers requiring the use of verb forms frequently used incorrectly.
14. Arithmetic.— Problems involving time.
 Hygiene.— Necessity of individual cup, soap and towel.
 Civics.— Use this memory gem:
 "We cannot all be heroes and thrill a hemisphere,
 With some great daring venture, some deed that mocks at fear,
 But we can fill a lifetime with kindly acts and true,
 There's always noble service for noble souls to do."
 English.— Spelling.
 Composition.— How I spend my evenings.

15. Arithmetic.— Miscellaneous problems.
Hygiene.— Tuberculosis.
Civics.— Thrift.
English.— Spelling. Writing of a friendly letter.
16. Arithmetic.— Review lesson on bills.
Hygiene.— Tuberculosis continued.
Civics.— Borrowing.
English.— Spelling. Dictation.
Oral discussion of dictation exercises.
17. Arithmetic.— Oral work in percentage.
Review fractional parts of a dollar.
Hygiene.— Care of eyes and ears.
Civics.— What a girl owes to her employer.
English.— Use of parts of irregular verbs. Writing a letter asking for a free booklet.
18. Arithmetic.— Oral work on percentage.
Written work on decimals.
Hygiene.— Digestion.
Civics.— Reading and discussion of an article cut from a magazine, "Beauty Suggestions for Business Girls."
English.— Spelling. Composition. What I owe my employer.
19. Problems involving percentage.
Hygiene.— Posture. Reading and discussion of "Beauty and Distinction of Carriage," by Mary Porter Beegle.
Civics.— Places of amusement.
English.— Spelling. Answer to an advertisement.
20. Arithmetic.— Problems involving fractions and percentage.
Hygiene.— Lunches.
Civics.— Talk on the United States.
English.— Spelling. Writing of a friendly letter.
21. Arithmetic.— Problems involving discount, fractions and percentage.
Hygiene.— After the day's work.
English.— Correction of common errors.
Correct use of almost and most.
22. Arithmetic.— Miscellaneous examples.
Hygiene.— Dispensaries and hospitals.
Civics.— Use of Boston Public Library.
English.— Spelling. Lesson on punctuation and sentence making.
23. Arithmetic.— Miscellaneous problems.
Civics.— Clean-up campaign.
Hygiene.— Reasons for the campaign.
Lesson on how the Government looks after the public health.
English.— Spelling. Dictation. Common errors.
24. Arithmetic.— Miscellaneous problems.
Hygiene.— Keeping well.
Civics.— Fire prevention; also care to avoid accidents.
English.— Correct use of pronouns.
Oral discussion of story being read in class.

25. Arithmetic.— Miscellaneous problems.
Hygiene.— A working girl's dress.
Civics.— Reading of magazines and newspapers.
English.— Spelling. Dictation. Discussion of dictation exercise.
26. Arithmetic.— Problems involving fractions and time.
Hygiene.— First-aid treatment.
Civics.— Planting.
English.— Spelling. Letters of sympathy.
27. Arithmetic.— Miscellaneous problems.
Hygiene.— Hygiene of respiration.
Civics.— Discussion of the meanings of the different holidays.
English.— Use of the pronoun when showing comparison.
Composition.— The Books I Like Best. My Friends.
28. Arithmetic.— Review lesson on decimals.
Hygiene.— Sleep.
Civics.— Finish discussion on holidays.
English.— Use of the past tense of some irregular verbs.
Correction of common errors.
29. Arithmetic.— Review lesson on decimals.
Hygiene.— Care of the skin.
Civics.— Government of the United States.
English.— Spelling. Dictation. Reproduction of a short story.
30. Arithmetic.— Miscellaneous problems.
Hygiene.— Exercise.
Civics.— Biography of some famous women.
31. Arithmetic.— Miscellaneous problems.
Hygiene.— Vacations.
Civics.— What we owe our parents.
English.— Spelling match.
Composition.— Mother.

BUSINESS PRACTICE OR ELEMENTARY SALESMANSHIP CLASS.

COMMERCIAL ARITHMETIC.

1. Addition.
 - a. Addition of salesman's account.
 - b. Check system of addition for accuracy.
2. Percentage (based on wages).
 - a. Find per cent of increase in wages.
 - b. Find per cent of reduction in wages.
3. Commission at given per cent on sales (using check system of addition).
4. Amount of sales when commission is given.
5. Amount to be invested, when commission plus investment is sent to agent.
6. Discount.
 - a. On cash sales.
 - (1) Marking up goods.
 - (a) List price.
 - (b) Asking price.
 - (2) Marking down goods.
 - (a) List price.
 - (b) Asking price.

- (3) Computing double discounts.
- (4) Computing triple discounts.
- (5) Bank discount.
- 7. Profit and loss.
 - a. Gain in business transactions.
 - b. Loss in business transactions.
- 8. Interest.
 - a. Simple (200-month method).
 - b. Accurate.
 - c. Compound.
 - (1) Computed annually.
 - (2) Computed semi-annually — quarterly.
- 9. Insurance.
 - a. Fire.
 - b. Marine.
 - c. Life.
- 10. Stocks and bonds.
 - (1) Definitions.
 - a. Par value.
 - b. Market value.
 - c. Dividend.
 - d. Share.
 - (2) Brokerage.
 - a. Method of computing.
 - b. By whom paid.
- 11. Taxes.
 - a. Property.
 - b. Poll.
- 12. Customs or duties.
 - a. Ad valorem.
 - (1) Gross and net weight.
 - (2) Tare and leakage.
 - (3) Method of computing.
 - b. Specific.
 - c. Internal revenue.
- 13. Partnership.
 - a. Method of computing.
 - (1) Assets.
 - (2) Liabilities.
 - b. Bankruptcy (its obligations).

COMMERCIAL CORRESPONDENCE.

- 1. Parts of a business letter.
 - a. Heading.
 - b. Introductory address.
 - c. Salutation.
 - d. Body of letter.
 - e. Complimentary close.
 - f. Signature.
 - g. Capitalization and punctuation.

2. Qualities of a business letter.
 - a. Brevity.
 - b. Terseness.
 - c. Clearness.
 - d. Completeness.
 - e. Exactness.
 - f. Coherence.
 - g. Method.
 - h. Courtesy.
3. Types of letters.
 - a. Letter of application for business position.
 - (1) In answer to box office advertisement in newspaper.
 - b. Letters of acceptance of business position.
 - c. Letters ordering goods.
 - d. Letters acknowledging orders.
 - e. Letters of inclosure.
 - f. Letters requesting payments.
 - g. Letters of introduction.
 - h. Letters of indorsement.
 - i. Letters of recommendation.
 - j. Circular letters.
 - k. Form letters.
4. Necessity of neatness, legibility and brevity in all business correspondence.

(A firm's business letter is a firm's trade-mark.)

SALESMANSHIP.

1. Requirements of a good salesman.
 - a. Personal neatness.
 - b. Knowledge of stock.
 - (1) Complete.
 - (2) Accurate.
 - c. Pleasing personality.
 - (1) Magnetism.
 - d. Persistency.
 - e. Optimism.
2. Manner of approaching customers.
 - a. Politeness.
 - b. Courtesy.
 - c. Indulgence.
3. Making a sale.
 - a. The correct moment.
 - b. Study of a customer.
 - c. Ability to see what customer wants.
 - d. Show different grades in stock.
 - e. Help customer in choice.
 - f. Straightforwardness and truthfulness regarding goods.
4. Closing a sale.
 - a. Promise to rectify any dissatisfaction.
 - b. Invitation to call again.
 - c. Thanks for the sale.

5. A satisfied customer.

- a. The best business asset.
- b. Certainty of future trade.

Oral discussion of the following topics. Members of the class usually discuss these topics in the form of a debate:

- a. Would it be better for a salesman to sell shoes in New England or in the Western States of Montana and Colorado?
- b. Would the Southern States be a good territory to sell manufactured cotton goods and heavy clothing?
- c. Would Massachusetts and Pennsylvania be good territories to sell machinists' supplies?
- d. Has a salesman in a store a more difficult position than a salesman on the road?
- e. The three ways of paying a salesman.
 1. By a straight salary.
 2. Salary and commission.
 3. Straight commission.
- f. The bonus system in selling.
- g. *Resolved:* That the best way of paying a salesman is a straight salary.
- h. *Resolved:* That the bonus system in selling has proven successful.
- i. *Resolved:* That modern extensive advertising has made the travelling salesman unnecessary.
- j. What is the difference between order taking and selling?

SPELLING.

- a. Business words in common use.
- b. Business phrases and expressions.
- c. Abbreviations of business terms.
- d. Abbreviations of the names of states.
- e. Abbreviations of the names of cities and railroads.

PERSONAL HYGIENE.

Teach the necessity of personal cleanliness from a triple viewpoint. (1) To preserve the boy's health in business; (2) To please his employer (a clean boy is welcome, whereas an unclean boy is a poor advertisement for the firm); (3) The boy's duty to his fellow employees (an unclean employee is shunned by his fellow workers).

Oral discussion (based on boys' experiences) and written compositions on the following subjects:

- a. Cleanliness in business.
- b. Neatness in business.
- c. The care of the body (to prevent sickness and please employer).
- d. Requirements for health in business.
 1. Fresh air (sunshine).
 2. Cleanliness.
 3. Wholesome food.
 4. Exercise.
- e. The need of exercise for a business boy (gymnasium or outdoor exercise).
- f. The care of the teeth.
 1. Their influence on health.

- g.* Cigarette smoking (detriment to health).
 - 1. Colored fingers.
 - 2. Employers do not want a cigarette smoker.
- h.* The necessity of keeping healthy in the business world.
 - 1. The sick boy or man is not wanted.
- i.* "The survival of the fittest."
(Its meaning as applied to modern business.)
- j.* Employments dangerous to health.
- k.* Necessity for ventilation of offices and factories.
 - 1. To guard health of employees.
 - 2. To do better work.
- l.* Legislation enacted by the state to guard health and life.
 - 1. Prohibiting expectorating on floors of offices and factories.
 - 2. Requiring windows to be open to flush rooms with fresh air.
 - 3. Requiring sufficient fire escapes and means of egress from buildings.
 - 4. Requiring doors opening outward.

BUSINESS COMPOSITION.

Written English composition on the following subjects related to business and the business world.

- a.* Honesty in business.
- b.* Accuracy in business.
- c.* Persistency in business.
- d.* Cheerfulness in business.
- e.* Politeness in business.
- f.* What qualities does any employer require in his salesman?
- g.* What qualities does an employer require in his errand boy?
- h.* How can an errand boy get a promotion on the job?
- i.* Punctuality in business.
- j.* Should an employer fine his employees who arrive late for work?
- k.* The value of time in business.
- l.* The advantages and disadvantages of a cash and credit system of accounts.
- m.* The advantages of the parcel post.
- n.* The advantages of a registered letter.
- o.* The advantages of the postal money order.
- p.* Discussions of the R. G. Dun and Bradstreet agencies for rating the financial credit of business men.
- q.* How to find work. (The Continuation School Employment Bureau places all out-of-work boys.)
- r.* Where, in the first place, should an out-of-work boy go?
- s.* Necessity of staying on one job and not jumping thoughtlessly from job to job.
- t.* How must a boy work to contribute towards the firm's business success?
(Team work.)

DEBATING.

Argumentation has been found to be a pleasing feature of this course and a great stimulator of team work and class spirit. The debates are conducted entirely by the class which chooses its own chairman. A profitable and instructive English exercise in grammatical accuracy and self-expression will result from constructive criticism of the speeches made. Intermember debating in the class furnishes competition and thus stimulates effort, while

interclass debating in the school as has been demonstrated by the debates held is a wonderful incentive to team work.

The following questions have been debated "pro" and "con":

- a. *Resolved:* That compulsory military training should be adopted in the Boston public schools.
- b. *Resolved:* That an organized plan of national preparedness should be adopted by the United States.
- c. *Resolved:* That the United States Government should own and operate the railroads of the United States.
- d. *Resolved:* That the United States Government should restrict immigration to the United States.
- e. *Resolved:* That Washington was a greater man than Lincoln.
- f. *Resolved:* That Grant was a greater general than Lee. (Etc.)

COMMUNITY CIVICS.

1. The city.
 - a. A collection of individuals, the success of which as a whole depends upon the success of each individual in it. (Team work.)
 - b. A good citizen is an honor to himself and city. (Self-advancement.)
 - c. Political equality of citizens. (Trustworthiness.)
2. Purposes of government.
 - a. Laws made for the common benefit of all.
 - b. For the common protection of life and property.
 - c. Dependence of individual welfare upon community welfare.
3. Advantages of government.
 - a. Safety of people.
 - (1) Policemen to protect life and property.
 - (2) Firemen to protect property.
 - (3) Health department to protect health.
 - b. Convenience of people.
 - (1) Street department for public convenience.
 - (2) Water department for public convenience.
 - (3) Public schools for children.
 - (4) Public evening schools for adults.
 - (5) Public libraries for the people.
 - (6) Public art museums for the people.
4. Duties toward government.
 - a. On part of individual.
 - (1) To obey laws faithfully.
 - (2) To vote for upright men to conduct the city's affairs.
 - (3) Not to destroy nor mutilate public or private property.
(Respect for property.)
5. City government of Boston.
 - a. Legislative department.
 - b. Executive department.
 - c. Judicial department. (The Juvenile Court.)
 - (1) The Mayor and his duties.
 - (2) The City Council.
 - (3) The Finance Commission.
 - (4) The Civil Service Commission.
 - (5) Other departments.
 - d. Advantages of present charter.

6. Oral discussion of the following subjects, viz.:
 - a. An employer has a right to a boy's best efforts and best work. (Sufficient sleep each night.)
 - b. Gang spirit — coöperation — all working together for the good of the firm.
 - c. Regard for public and private property.
 - d. Economy in business. (A saving of time and money.)
 - e. What has an employer the right to expect from his employees?
 - f. How do you spend your evenings? (Evening centers, libraries, gymnasiums.)
 - g. Thrift. (The saving of money, time and their equivalent.)
 - h. A bank account. (Its advantages.)
 - i. A study of the Christmas savings plan.
 - j. Clean-up week in Boston. (Keep the streets and yards clean.)
 - k. Health week in Boston. (Avoid expectorating on sidewalks.)
7. Teach civic virtues through biography, history, *e. g.*:
 - (1) Abraham Lincoln, lesson taught, — equality of citizenship and opportunity in the United States.
 - (2) Washington, lesson taught — courage and determination of purpose when in the right cause.
 - (3) Henry Clay — "I would rather be right than be President." (The supreme value of the truth.)
 - (4) Andrew Carnegie. Public benefactor and philanthropist.

OFFICE ROUTINE CLASS.

Work in the office practice class in the Continuation School for boys and girls, fourteen to sixteen years of age, who are employed in offices, must be designed to fit the needs of the individual pupils.

All work in the class depends upon the follow-up visit to the place of employment. On this visit inquiry is made as to how the pupil can be helped on the present job or prepared for a promotion to a higher position in the firm. The employer is usually interested and willing to give suggestions. With the information thus obtained lessons are prepared and the pupil is drilled along the lines suggested.

The following subjects cover the principal topics suggested for the instruction of pupils. Some of them will furnish enough work for a two-year period. All may be used for short intensive study. Therefore no attempt has been made to make a division of lesson time:

OUTLINE.

General office training.

Filing, mailing, telephone, banking, forms of remittances, copying records.

Use of office appliances.

Adding and listing machine, calculating machine, speedograph, typewriter, dictaphone.

Shipping.

Deportment and business ethics.

Filing.

Object. Kinds. Numerical. Alphabetical, single letter guide cards dividing the alphabet into 40, 80, 120 or even more subdivisions.

Geographical. Alphabetical or numerical.

Subject. Index guides. Folders.

Systems.

Library Bureau. Yawman Erbe. Box files. Shannon.

Any other in use in offices.

Mailing.

Outgoing mail.—Preparing the mail for mailing. Signatures. Inclosures. Folding. Importance of neatness in handling. Stamping. Determining postage. Use of parcel post guide. Map. Circulars. Advertising matter and catalogues. Learn mailing weights.

Incoming mail.—Care in opening. Watch for inclosures. Arranging for delivery to departments. Trips to postoffice.

Sample lesson in determining postage and in using parcel post guide and map.

Find cost of mailing $1\frac{1}{2}$ oz. letter to Tampa, Florida.

Find cost of mailing a booklet weighing $1\frac{3}{4}$ oz. to San Francisco, Cal.

Find cost of mailing an 8 oz. newspaper to San Juan, Porto Rico.

Find cost of mailing a $2\frac{1}{2}$ oz. letter to Honolulu, Hawaii.

Find cost of mailing a 12 oz. catalogue to St. Louis, Mo.

Find cost of mailing a $2\frac{1}{2}$ lb. package of merchandise to Portland, Me.

Find cost of mailing $1\frac{1}{4}$ lb. of merchandise, special delivery, and insured, to Chicago.

Telephone.

How to use the telephone. Pitching the voice. The human element in telephoning. Courtesy. Briefness in messages, but clearness. Repeating of messages. Notes of calls and numbers. Study of notes on telephoning gotten out by the telephone company. When possible, practice on the room 'phones. Finding numbers in book. Correct calling of numbers.

Sample lesson.

1. Call Beach 3640, Mr. C. M. Prothero, and make an appointment with him for Mr. Smith at 3 o'clock this afternoon, or at any hour after that that suits his convenience. Make a note of the hour for Mr. Smith.

2. Call the McKenzie Engraving Co., and ask them to send a boy for the half-tone cuts they need in making the electros we ordered.

Banking.

Classes of banks. State. Savings, coöperative and trust companies.

National banks. Business men's banks. National banks and trust companies.

Why and how to open account in. Use by business men. Getting money ready for deposit. Making out deposit slip. Certifying checks.

Familiarity with bank drafts, notes, cashier's checks, certified checks, certificates of deposit, bonds, stock, mortgages, bills of lading, etc.

Collateral.

Sample lesson:

You are to deposit in the Metropolitan Trust Co., the following
1 one hundred dollar bill, 6 twenty dollar bills,
 5 five dollar bills, 17 one dollar bills, 1 fifty dollar bill, 7 ten dollar bills,

6 two dollar bills and a bag of change amounting to 21 dollars and 37 cents; there are also the following checks:

On Old Colony Trust	\$25.78
On Fourth Nat'l	56.75
On Framingham Nat'l Bank of Framingham,	47.25
On First Nat'l Bank of Bangor, Me.	500.00

Make out a deposit slip and tell how the money should be arranged.

Forms of remittances.

Bank drafts, cashier's checks, personal checks, certified checks, postal money orders, express money orders, registered letters, certificates of deposit, postage stamps, promissory notes — demand, negotiable, and joint — method of collecting.

Commercial drafts — time drafts and sight drafts. Making collections by drafts.

Copying records.

Practice in copying records on cards or on sheets. Attention to copying accurately, small and neat writing, and keeping within the space allowed.

Use of office appliances.

Adding and listing machine. Care of machine. Inserting paper, getting star practice in listing, checking back, getting total.

Calculating machine. Fingering, drilling in addition and multiplication.

Speedograph. Practice in taking off copies.

Typewriter. Fingering and mastery of keyboard, then drill on whatever pupil needs in his work in office, as, addressing envelopes, billing, tabulating and copying.

Dictaphone. Practice in the use of it.

Shipping.

Shipping terms: Consignor, consignee, consignment, common carrier, line, route and routed, traffic, waybill, F. O. B.

Method of shipping.— Freight, express, mail. Advantages.

Freight shipments.— Minimum weight determining rate. Cartage charges, freight charges.

Bill of lading. Straight and order. Draft. How issued.

Shipping receipt. Prepaid charges. Advance charges. Arrival notice, demurrage. Limited liability. Shipments by water, wharf receipt, clearing of Custom House.

Express shipments.— List of suburban express companies and sections they cover. Express receipts.

Sample lesson.

1. Make out a straight bill of lading for the following: We are shipping today to James Wilson & Co., 192 Broad Street, Philadelphia, 12 cs. of Woolen Goods, marked J. W. & Co., Philadelphia. Rate, First Class. 75c per hundred pounds. The cases weigh as follows: No. 1, 182 pds.; No. 2, 176; No. 3, 181; No. 4, 178; No. 5, 190; No. 6, 187; No. 7, 177; No. 8, 186; No. 9, 179; No. 10, 188; No. 11, 179; No. 12, 191. Charges prepaid.

2. We have received an order from the Globe Mercantile Co., Cleveland, Ohio, for cotton goods, invoice \$356.75. They request that we ship the goods with draft for the amount attached to the bill of lading. Make

out: 1. An order bill of lading covering the shipment. 2. The Commercial Draft to be attached. 3. The Invoice. The Shipment in three cases weighing 160, 175, and 169 pounds. The classification is First Class and the rate is \$1.25 per hundred pounds.

Department and business ethics.

Importance.—Efficiency of service increases earning capacity.

Factors.—Reliability, honesty, loyalty, promptness, application, etc.

Agreeability, personality, neatness, courtesy, enthusiasm, adaptability.

Ability and initiative.

BOOKKEEPING CLASS.

The work in bookkeeping is closely allied to the work in the same subject in the evening high schools and the completion of this work counts as credit toward an evening high school diploma. On account of the changing nature of the class the work is wholly individual or with groups of approximately the same advancement. The course is planned for thirty-five lessons for a pupil of average ability. Some may accomplish the work in less time while some will need more. A pupil entering from day high school begins at the point where previous training left off. On completing Bookkeeping I and English I a pupil may transfer to Typewriting I and English II, or may continue with Bookkeeping II.

No text books are used. The lessons are prepared on typewritten sheets. Many short exercises in debits and credits are given to fix principles and other exercises are written with more careful attention to form. The topics for class discussion are carried on at intervals through the year.

OUTLINE FOR BOOKKEEPING I.

Part I.

Lessons 1 to 3. Principles of debit and credit.

1. Analysis of numerous simple cash transactions into debit and credit.
2. Journalizing — to establish debit and credit.

Lessons 4 to 8. Principles of debit and credit applied to buying and selling on account.

Lessons 9 to 12. Use of ledger.

1. Necessity of grouping items under accounts.
2. Posting from journal.
3. Checking and pencil footing.
4. Taking a trial balance.
 - a. What it does and does not show.
 - b. Correcting mistakes.

Lessons 13 to 15. Promissory notes.

1. Distinction between notes receivable and notes payable.
2. Analysis into debit and credit transactions involving giving, receiving paying, transferring or discounting notes.

Part II.

Lessons 16 to 22. Cash book.

1. Form and method of making entries.
2. Making cash book entries from a set already journalized.
3. Balancing and closing the book.

4. Original cash book exercises.
5. Use of cash book and journal as books of original entry.
6. Posting from cash book and journal.

Lessons 22 to 24. Statements.

1. Profit and loss.
2. Assets and liabilities.

Lessons 25 to 35. Purchases and sales books.

1. Form and method of making entries.
2. Use with cash book and journal as books of original entry.
3. Posting from all books.

Topics for Class Presentation and Exercises.

1. Bills and statements.
Billing from orders and from ledger.
2. Forms of promissory notes.
3. Banking.
 - a. Kinds of banks.
 - b. Opening account.
 - c. Making deposits: Use of pass book and deposit slips.
 - d. Checks and check books.
 - e. Following course of check from the time it leaves drawer's hands until it is returned.
 - f. Statements: Form and reconciliation with check book.
4. Function of common ledger accounts.
5. Discount: Bank, discount for cash, and trade discount.
6. Interest: Uses in business, common methods of finding.

BOOKKEEPING II.

The demand for Bookkeeping II is limited. The course is essentially the same as Bookkeeping II for evening schools.

TYPEWRITING CLASS.

The general purpose of a course in typewriting is to train pupils to become accurate touch typists, by means of the all-finger method of operation. As accuracy in typing is persisted in, increased speed will be acquired. If correct touch typing is insisted upon, self-control, concentration, nerve and muscular coördination will develop.

The work is largely individual and is altered and intensified according to the needs of the pupil in his present position, his future ambition, and by coöperation with the work in English and at the evening school. Whenever possible drill on special points may be given to small groups.

TYPEWRITING 1.

I. General survey of the machine.

Comparison with other models on the market, similarities and differences.

Economic value of the typewriter.

Brief history of its invention and development.

Most prominent parts of the machine — keyboard, space bar, ribbon, carriage, roller, paper release. Other attachments taught as soon as pupil is ready to use them.

Importance of accuracy, speed and ease in operation.

II. Care of machine.

Daily cleaning, weekly oiling.

Simple repairs, changing ribbon, etc.

TYPEWRITING 2.

III. Position of body.

Emphasize need of a comfortable hygienic position, secured by sitting with straight back, feet on floor, wrists up.

Throughout entire course frequent reminder of correct position is advisable.

IV. Touch.

Firm, sharp tap.

Common errors and difficulties explained and wrong habits checked at the outset.

Double letters (fall, add, little), second letter to be struck with same force as the first.

V. Keyboard.

Memorized as soon as possible by *typing*.

Importance and location of "Position Row."

asdf left hand

;lkj right hand

VI. Exercises.

Keyboard drills.

afsd ;lkj fdsa jkl: asdfjkl: etc.

Keyboard drills and short words.

asdfgf ;lkjhj glad had hall shall

Keyboard drills and longer words.

asdedcdf ;lkik,kj receive fulfill dislike.

Keyboard drills and phrases.

in my letter, early reply, by return mail.

TYPEWRITING 3.

Keyboard drills and short sentences.

We will ship by express. Shall we ship by rail?

Send your order at once.

Keyboard drills and longer sentences, short paragraphs.

Keyboard drills on figures.

Figures and words there 41987 threw 42091

Figures as fractions $16\frac{2}{3}$ $57\frac{3}{8}$

Keyboard drills on marks of punctuation, symbols, etc.

Special drill on marks and symbols not on keyboard.

Use of capitals.

Shift keys, shift lock.

Centering titles.

Definite rule.

Application.

Typing from written notes.

Typing from direct dictation.

VII. Business correspondence.

Models should be absolutely correct as to English, punctuation, spelling, arrangement, etc. Avoid stilted, obsolete forms.

Coöperation with work in English will prove invaluable here.

Various letter forms in current use.

Pupil is requested to bring to class specimens of correspondence as used at his work. Intensive work on these.

Use of carbon.

Use of hectograph ribbon.

Use of stencil.

Typing from dictaphone. (Coöperate with office practice class.)

TYPEWRITING 4.

VIII. Mailing.

Addressing envelopes, various arrangements and sizes of envelopes. Folding, enclosures.

IX. Typing checks, postal cards, catalogue cards, telegrams, etc.

X. Filling in of form letters.

XI. Billing.

Simple work from models supplemented by definite work from actual bills which pupil brings to class.

XII. Tabulating.

Simple work from models supplemented by definite assigned problems.

XIII. Simple legal work, for arrangement.

XIV. Speed work.

Typing simple sentences in given length of time, increasing copy matter as speed increases.

XV. Transcribing shorthand notes by pupils who are studying shorthand in the evening schools.

XVI. Occasional discussion of general office duties.

Value of loyalty, integrity, initiative, judgment, neatness of work and person.

Necessity for being up-to-date as to arrangement of work, changes in business methods, etc.

STORE CLASSES.

Reprint from Bulletin 22, Commercial Education Series, No. 2, issued by the Federal Board for Vocational Education, Washington. This part of the bulletin was compiled for the most part from the experiences of the Boston Continuation School classes in retail stores.

**Program of Part-time Continuation Courses for Workers Employed
in Retail Selling Stores.**

ARITHMETIC.

First Year.

[30 minutes a week.]

1. Drill in fundamentals to develop accuracy and speed:
Addition: Horizontal, vertical, group work, double columns, number combinations, tally work.
Subtraction: Addition method, making change, deducting credits.
Multiplication: Tables, short methods, business methods, application to sales-check work.
Division: Long, short, store problems, review in connection with fractions.
2. United States money: Decimals; store problems.
3. Units of measure: Yards, foot, inch, dozen, gross, pound, ounce, quire, quart, pint, minute, month, year.
4. Fractions: Use of, in store work, relation to units and to one another, store or business fractions, addition, subtraction, multiplication and division of fractions and their relation and application to store work, decimal fractions.
5. Decimals: Interpreted as a group of fractional parts whose value may be expressed in three ways. Equivalents of common and decimal fractions familiarized. Drill given in connection with fractional part of dollar.

Second Year.

[30 minutes a week.]

1. Review of previous year's work.
2. Percentage and its application to store work; interpretation as a group of fractional parts whose value may be expressed in three ways. Application to daily problems of commission, discounts, profits, mark up, reduction, interest.
3. Aliquot parts: Store problems.
4. Expense and "overheads."
5. Making out simple bills, accounting, invoices.
6. Bank checks and receipts.
7. Profit and loss, commission, discount.
8. Budgets: Personal cash discounts, per cent allowed for food, clothing, rent, amusements. Relation of expenditures to income. Savings, credit unions, savings banks, insurance, thrift stamps.

SPELLING.

[30 minutes every other week.]

Customers' names and addresses, streets, cities, towns, states, merchandise names, department names.

The choice of words for spelling lessons should be determined by the needs of the pupils in their written English. It is recommended that lists of words frequently misspelled be selected from the different store departments and assigned to the pupils and also from the results of their own written work.

HYGIENE.

First Year.

[30 minutes every other week.]

1. Good health, necessity for, greatest business asset.
2. Personal appearance.
3. Teeth, importance and care of.
4. Cleanliness.
5. Fresh air, sunshine, ventilation.
6. Food and drink; the city's water supply.
7. Recreation, work, rest.
8. Posture, sitting, standing, walking.
9. Habits.
10. Exercise, circulation, digestion.
11. Clothing.
12. Hygiene: Personal, home, public.
13. Garbage and waste.
14. Infectious diseases: Ways of infection, means of protection.
15. Tuberculosis.
16. Colds and their prevention.
17. Mosquitoes and flies.
18. Feet and footwear.

Second Year.

[30 minutes every other week.]

1. Review of previous year's work.
2. Breathing: Nature and bad effects of dust; nose and mouth.
3. What to eat and what not to eat; suitable lunches.
4. Types and kinds of food: Purpose of, preparation of, economy in buying, and care as to wastefulness; organs of digestion.
5. Circulation: Organs; conditions for good blood.
6. Nervous system: Organs, location, functions of brain, spinal cord and nerves. Effect of emotions; formation of a habit and its usefulness.
7. Use of coffee, tea, milk, chocolate, water; necessity for, amount of.
8. Diseases and remedies.
9. The sick room and how to care for it.
10. Germs and germ diseases.

PHYSICAL EXERCISES.

[1½ minutes a week.]

The time allowed for this subject is so short that any short exercise may be taken while the room has a complete change of air.

TEXTILES AND MERCHANDISE.

First Year.

[24 minutes every other week.]

1. Importance and advantage of knowledge of textiles to store employees.
2. Observation and study of staple goods; cloth.
3. Fibers.

4. Spinning and weaving.
5. Raw materials; cotton, wool.
6. Manufacturing processes; cotton, wool.
7. Finished product; cotton, wool.

Second Year.

[18 minutes every week.]

1. Review of previous year's work.
2. Fundamental processes of cloth making; flax and wool wheels.
3. Inventors and inventions of the eighteenth century and the results of their work.
4. Essentials of modern spinning.
5. Classification of weaves and mounting of cloth samples.
6. Special study of wool, wool markets, sheep, sheep raising.
7. Woolen, worsted, wool tariff.
8. Study of cotton, cotton markets, prices, manufacturing centers, by-products, varieties of finished product.
9. Study of flax fiber, characteristics, manufacturing processes, finishing processes, adulteration, finished product.
10. Study of silkworm, reeling and spinning silk, manufacturing processes, weighing, adulterating, finished product.
11. Study of other textile fibers.
12. Finished products of cotton, wool, silk, linen and minor fabrics.
13. Leather: Raw material, manufacturing processes, finished products.
14. Notions, smallwares, making of pins, needles, buttons.

PENMANSHIP.

First Year.

[20 minutes a week.]

1. Correct position of body, arm, hand.
2. Relaxation exercises.
3. Penholding.
4. Speed movements.
5. Small and capital letters.
6. Drill in Palmer method writing exercises.

Second Year.

[20 minutes a week.]

1. Review of previous year's work.
2. Effort directed to attaining speed with each movement, good forms, correct position.

Completion of Palmer method of business writing.

ENGLISH.

First Year.

[30 minutes a week or 15 minutes daily.]

1. Cultivation and proper use of the voice; advantage.
2. Clear articulation, pronunciation, inflection.

3. Word building, increasing vocabulary.
4. Sentence making, construction.
5. Common errors of speech.
6. Store topics.
7. Letters: Business, friendly.
8. Formation of plurals and possessives.
9. Right word for merchandise.

Second Year.

[30 minutes a week or 15 minutes daily.]

1. Review of previous year's work.
2. Grammatical accuracy, as to —
 - a. Construction of sentences.
 - b. Use of the parts of verbs.
 - c. Agreement in number of —
 - (1) Verb with subject.
 - (2) Pronoun with antecedent.
 - (3) "This," "those," etc., with noun.
3. Comparison of adjectives; adjectives for store work; discrimination between adjectives and adverbs; comparison of adverbs.
4. Use of personal pronouns.
5. Irregular verbs.
6. Written work on store merchandise, store experiences, talking points of goods, other store topics.
7. Books and reading.
8. Letter-writing: Superscription on an envelope, answers to advertisements, business notes, notes of invitations, acceptance, regret.
9. Use of dictionary.

COMMERCIAL GEOGRAPHY.

First Year.

[40 minutes every other week.]

1. Local community: History, position, growth, harbor, trade, business, steamship lines, railroad terminals.
2. The state: Chief industries, cities, causes for developments of commerce, railroads and waterways.
3. Neighboring states: Manufacturing center, reasons, trade routes, foreign and domestic commerce, railroads and waterways, large cities, occupations and productions.
4. Study of commercial centers of United States; their production and distribution.

Second Year.

[40 minutes every other week.]

1. Review of previous year's work.
2. Study of settlements, their origin and development.
3. Study of typical settlement as a distributing center.
4. Industries.

5. Typical market of the world.
 - a. United States.
 - b. Position.
 - c. Factors governing production.
 - d. Highways of commerce and methods of transportation.
 - e. Exports and imports.
 - f. Railroads, canals.
6. France.
7. Great Britain.
8. Germany.
9. Japan.
10. South America.

CITIZENSHIP.

First Year.

[30 minutes every other week.]

1. Citizenship: Meaning of; kinds.
2. City government: Departments, duties of each, need for, head.
3. State government: Head, State House, purpose of, state laws, how made.
4. National Government: History of, National Capitol, purpose of, head.

Second Year.

[30 minutes every other week.]

1. Observance of law and order in the family: Treatment of contagious diseases, observance of health laws, help of city, amusements and recreation.
2. Community laws: Duties of neighbors, public health, playgrounds, libraries, advantages.
3. American Nation: National flag, advantages of being a citizen, duties and rights of citizens to our Government.
4. Lawmakers: Representatives, Senators, duties of.
5. Municipal buildings, school centers, Animal Rescue League.
6. Purpose of Constitution; what national government does for its people.
7. Some great Americans.

CURRENT EVENTS AND HISTORY.

The work will suggest itself from the subject. The pupils bring in much of the subject matter. The life history of America's great men and women is always an inspiration to the pupils.

BUSINESS ETHICS.

This subject is always most interesting to pupils and the material may be furnished by the pupils. The discussion of success and honesty in business has a most helpful, moral effect on the formation of character. Appropriate dress, personal appearance, conduct, manners, attitude toward work.

LECTURES AND EXTRAS.

[15 minutes every other week.]

The lecture period is taken up by some head of department or member of the firm, who talks to the class upon different store subjects.

BUSINESS TOPICS AND STORE PROBLEMS.

First Year.

[32 minutes a week.]

1. Tying knots, boxes for immediate delivery, city delivery.
2. Making change readily.
3. Duties of cashiers, bundle girls, floor boys.
4. Qualities which make for efficiency.
 - a. Willingness to serve.
 - b. Quickness, accuracy.
5. Wrapping of delivered goods in paper.
 - a. With string.
 - b. Without string.
 - c. Use of cardboard.
6. Tying packages for parcel post, express.
7. Folding or packing suits, dresses, skirts, waists.
8. Discussion of store problems.
9. Service to customers.

SALESMANSHIP AND STORE TOPICS.

Second Year.

[45 minutes a week.]

1. Store organization.
2. Store system.
3. Sales-slip practice.
4. Store directory.
5. Business qualifications.
6. Truthfulness in business.
7. Store courtesy.
8. Dignity and responsibility of work.
9. Relation of employee to employer and to fellow workers.
10. Care of stock.
11. Approach to customer.
12. Talking points of merchandise.
13. Power of suggestion.
14. Demonstration sale.

OUTLINE OF A COURSE IN STORE ARITHMETIC.

Lesson I.

Introductory lesson.

Need for arithmetic in stores.

Operations used in store work.

1. Addition of tallies.
Addition of items when more than one is purchased.
2. Subtraction in making change.
Subtracting credits.
3. Multiplication.
4. Percentage.
 - Commission.
 - Discount.
5. Fractions — selling yard goods.

Reasons why arithmetic is hard.

Combination of 2 figures.

Finding of hard combinations.

One tally given.

Emphasis laid on speed and accuracy.

Lesson II.

Drill on hard combinations.

2	3	4	4	5	5	5	6	6	7	4
6	8	7	8	6	7	8	7	8	8	5
—	—	—	—	—	=	—	—	—	—	—

Adding of tallies.

Lesson III.

Adding of tally for speed.

Combinations of figures that make 10.

5	1	2	3	6
5	9	8	7	4
—	—	—	—	—

Several tallies given for drill.

Lesson IV.

Adding of tally for speed.

Drill on hard combinations.

Drill on 10 combinations.

Adding by 10 — subtracting 1.

Lesson V.

Adding 9's.

Add 10 — subtract 1.

Much drill.

Adding of tallies.

Lesson VI.

Subtraction.

Making of change.

Adding of 9's.

Tally given.

Lesson VII.

Tally.

Subtraction of credits.

Subtraction of number of yards from bolts.

Example: 10 yards on a bolt; $3\frac{1}{2}$ yards cut off. How many yards left?

Refer to inventories.

Adding 9's.

Lesson VIII.

Multiplication.

Drill on multiplication tables with cards.

Store problems given.

Example: 4 yards @ 37c. a yard.

Tally.

Lesson IX.

Short cut for multiplication by 5.

Multiply by 10. Divide by 2.

Drill.

Tally.

Lesson X.

Multiplying by 11. Example: 27×11 .

Put down right-hand figure, 7; add first and second figures (2 and 7);
put down left-hand figure, 297.

Drill on easy numbers as 24×11 , 36×11 , 43×11 , etc.

Lesson XI.

Drill on multiplication by 11.

More difficult combinations.

29-347, etc.

Tally.

Lesson XII.

Multiplying by 19.

Call it 20 and subtract.

Much drill.

Multiply by 29.

Lesson XIII.

Drill on multiplying by 39, 49, 59.

Tally.

Lesson XIV.

Drill on multiplying by 69, 79, 1.19, etc.

Starting on cash account.

Lesson XV.

One problem with multiplication given.

Beginning on fractions.

Units of measurements.

Enumeration of different kinds.

Enumeration of those used in store.

Dozens, dollars, yards.

Different ways of writing fractions.

Meaning of fractions.

Lesson XVI.

Fractions used in store.

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{8}$ $\frac{3}{4}$ $\frac{3}{8}$ $\frac{5}{8}$ $\frac{7}{8}$ used most frequently.
 $\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{6}$ $\frac{5}{6}$ $\frac{5}{16}$ used occasionally.

How to find $\frac{1}{2}$ of anything.

Ways of writing.

Lesson XVII.

Drill on $\frac{1}{2}$:

How to find $\frac{1}{2}$ a dozen.

How to find $\frac{1}{2}$ a dollar..

How to find $\frac{1}{2}$ a yard.

Drill on $\frac{1}{2}$ at —c.

Drill on $\frac{1}{2}$ dozen at —c.

Drill on — yards at 50c. a yard.

Lesson XVIII.

Finding of $\frac{1}{4}$ yard, dozen, dollar.

Drill as on $\frac{1}{2}$ c.

Tally.

Lesson XIX.

Finding of $\frac{3}{4}$ of yard, dozen, dollar.

Drill.

Review of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$.

Lesson XX.

Finding $\frac{1}{8}$ yard, dollar, dozen.

Drill.

Review drill as above.

Tally.

Lesson XXI.

Finding of $\frac{3}{8}$ yard, dollar, dozen.

Reviewing of other fractions as above.

Lesson XXII.

Finding of $\frac{5}{8}$ yard, dozen, dollar.

Drill.

Tally.

Lesson XXIII.

Finding of $\frac{7}{8}$ yard, dozen, dollar.

Drill.

Tally.

Lesson XXIV.

Finding of $\frac{1}{3}$, $\frac{2}{3}$ yard, dozen, dollar.

Review 8th.

Tally.

Lesson XXV.

Finding $\frac{1}{6}$, $\frac{5}{6}$, $\frac{1}{16}$.

Review others.

Lesson XXVI.

Working with fractional parts of yards and dollar.

Example:

$3\frac{1}{2}$ yards @ $12\frac{1}{2}c$. a yard.

$4\frac{1}{4}$ yards @ $37\frac{1}{2}c$. a yard, etc.

Lesson XXVII.

Drill on fractional parts of yards and dollar.

Example: $5\frac{1}{8}$ yards @ $37\frac{1}{2}c$. a yard.

Lesson XXVIII.

Drill on problems similar to above.

Pass actual sales-slips to girls.

Each girl reads the problems on her slip.

Class works them out and the first girl then explains her slip.

Example:

$1\frac{1}{4}$ yards of silk @ \$2.

$\frac{1}{8}$ yard crepe @ \$0.50.

$\frac{1}{2}$ yard silk @ \$2.60.

$\frac{1}{4}$ yard pongee @ \$1.50.

$\frac{3}{8}$ yard silk @ \$2.50.

Lesson XXIX

Continuation of last lesson.

Lesson XXX.

Same as Lesson XXIX.

Lesson XXXI.

Tally.

Meaning of per cent.

Where used in store.

Method of finding, ways of writing it.

Cash accounts.

Lesson XXXII.

Tally.

Review fractions.

Drill on 1% commission.

Drill on 10% commission.

Drill on 100% commission.

Lesson XXXIII.

Drill on 2% commission and discount.

Drill on 5% commission and interest.

Drill on 3% commission.

Drill on 4% commission.

Lesson XXXIV.

Drill on 20% commission and discount.

Drill on 25% commission.

Drill on 50% commission.

Drill on 10% commission.

Drill on $33\frac{1}{3}\%$ commission.

Lesson XXXV.

Drill on $4\frac{1}{2}\%$ interest on money.

Drill on $1\frac{1}{2}\%$ commission.

Drill on $1\frac{1}{2}\%$ discount.

Review of other per cents.

Tally.

Lesson XXXVI.

Review of fractions.

Review of percentages.

Adding of tallies.

OUTLINE FOR TRADE TRAINING AND CORRELATED ACADEMIC
WORK IN CURTAIN FACTORY.

I. a. Preliminary trade training. (Three weeks to four months.)

1. Examining curtains for imperfection.
2. Cutting threads and examining for workmanship.
3. Counting lots and pairing curtains.
4. Repairing skips in sewing of laces.

b. Correlated work.

1. Oral English — Interpreting orders, giving messages, etc.
2. Written English — Spelling, dictation of names used in curtain trade, etc.
3. Arithmetic.
 - a. Adding daily records of all workers.
 - b. Copying order numbers for accuracy.
 - c. Counting and entering daily pairs and half pairs, and finding weekly total.
 - d. Practice on tickets and tags.
 - e. Dividing quantity of yards into number of pairs needed.
 - f. Verifying records of finishing department. (Addition and multiplication.)

II. a. Trade Training. (Advanced.) (Four months to two years.)

1. Making sash curtains and binding samples.
2. Joining laces by hand where pieced.
3. Putting in threads where broken by weaving. (Hand work.)
4. Making drawn work and hemstitched curtains.
5. Making curtains by machine.
6. Embroidering by machine.
7. Pressing curtains.
8. Hanging for inspection.
9. Folding for boxes.
10. Putting on paper, tagging, enveloping and checking tickets.
11. Boxing, marking, etc.
12. Errands between departments.
13. Preparing curtains for home work (laces, etc.).
14. Crocheting motifs (hand work).
15. Assembling and checking before shipment.

b. Correlated work.

1. Cotton and cotton industry.
 - a. History.— Ancient Hindoos, Egyptians and Chinese.
United States now raises three quarters of all cotton grown. East India, Egypt and Brazil raise most of the rest.
 - b. Where grown, description of Southern cotton field and the cotton pickers.
 - c. Packing for mill.
 - d. Making into fabrics, opening machines, lapper machines, card room, drawing frames, slubbers, speeders, spoolers, warpers, dye house, beaming frames, slashers, weave room, inspecting tables, baling presses, shipping.
 - e. Uses: Fabrics, rugs, shades, soaps, cooking oil, army tents and gun cotton.
 - f. Principal inventions connected with cotton.
2. Laces and draperies.
 - a. Origin. (Some time before sixteenth century — primitive laces.)
 - b. Lace making in Venice of sixteenth century.

- c. Development in modern times. France, England, Holland, Italy, Russia.
- d. Kinds.
 - 1. Needle or point (hand made).
 - 2. Pillow.
 - 3. Machine made. (More effort spent on this than on any branch of textile industry.
- e. Terms used for parts of laces.
 - 1. Gimp — center.
 - 2. Ties — outer threads.
 - 3. Reseau — part to hold pattern.
 - 4. Applique — piece made separately and sewed on.
 - 5. Cordonet — thread to outline pattern.
 - 6. Picot — loop on edge.
 - 7. Modes — ornamental fillings.

OUTLINE OF RELATED INFORMATION ON SHOE AND LEATHER WORK FOR EXPLANATION AND CLASS DISCUSSION IN A SHOE FACTORY.

LEATHER OUTLINE.

History of Leather Manufacture.

- I. Manufacture by Chinese.
- II. Manufacture by Babylonians.
- III. Manufacture by Egyptians.
- IV. Manufacture by Romans.
- V. Manufacture by Moors.
- VI. Manufacture by modern nations.

LESSONS 2 AND 3.

Sources of Skins.

- I. Animals they are procured from.
 - 1. Names.
 - 2. Reasons for killing.
 - 3. Name of meat from each animal.
 - 4. Difference in skins of wild and domestic animals.
 - 5. Skins only a by-product.
- II. Countries of supply.
 - 1. Countries where different animals are used for food.
 - 2. Names.
 - a. For different animals.
 - b. Location of these countries.
 - 3. Effect of supply on price.

LESSON 4.

Classes by Kind.

- I. Packer.
- II. City.
- III. Country.

- IV. Reasons for above name.
- V. Examples of each kind.

CLASSES BY WEIGHTS. (*Difference between Skins and Hides.*)

- I. Extreme light.
- II. Ohio buffs.
- III. Heavy cows.
- IV. Heavy steers.
- V. Bulls.
- VI. Explanation of each kind.

LESSON 5.

Classes by Defects.

- I. Grubby hides.
- II. Branded hides.
- III. Salt-stained hides.
- IV. Ticky hides.
- V. Scratched hides.
- VI. Grain damaged hides.
- VII. Hides injured from cattle fights.
- VIII. Hides injured from slaughter cuts.
- IX. Explanation of cause and result of each defect.

LESSON 6.

Curing of Hides.

- I. Cause.
- II. Necessities.
- III. Methods.
- IV. Places where each method is used.
- V. Test.
 - 1. Places given — class gives method of curing of skins to be sent to Boston.
 - 2. Methods given — class tells where each might be used and why.

LESSON 7.

Description of Visit to Slaughter House.

- I. Take-off.
- II. By-products and their different uses.
- III. Curing used.

LESSON 8.

Structure of Skin.

- I. Epidermis.
 - 1. Parts.
 - 2. Importance in tanning.
- II. Corium or true skin.
 - 1. Structure.
 - 2. Qualities necessary for good leather.
 - 3. Importance in tanning.
 - 4. Name of this in leather — grain side.

- III. Under skin.
 - 1. Parts.
 - 2. Name of this in leather — flesh side.
- IV. Samples of leather to select flesh and grain sides.

LESSONS 9 AND 10.

Beam-house Work.

- I. Diagram of beam-house.
- II. Different processes.
 - 1. Soaking and fleshing.
 - 2. Removing hair or liming.
 - 3. Deliming and bating and puering.
 - 4. Pickling.
- III. Condition of skins at end of this work.

LESSON 11.

Tanning.

- I. Different methods used.
 - 1. Vegetable.
 - 2. Mineral. (Tawing — Chrome.)
 - 3. Oil.
- II. Vegetable tanning.
 - 1. Materials used. (Names, properties of each, sources of each.)
 - 2. Description of process.
 - 3. Experiment with gelatine and tannin.
 - 4. Uses of leather thus tanned.
 - 5. Samples of leather showing effects of different vegetable tannins.

LESSON 12.

Mineral Tanning.

- I. Tawing.
 - 1. Materials used.
 - 2. Uses of leather thus tanned.
- II. Chrome.
 - 1. Discovery.
 - 2. One-bath process.
 - 3. Experiment.
 - a. Gelatine and bichromate of potash and hydrochloric acid.
 - b. Solution of hypo and hydrochloric acid.Mix a and b.
 - 4. Two-bath processes.
 - 5. Description of processes.
 - 6. Uses of leather thus tanned.
 - 7. Advantages and disadvantages as against vegetable tanning.

LESSON 13.

Finishing (of Shoe Upper Leather).

- I. Splitting.
- II. Shaving.

- III. Fat liquoring.
- IV. Dyeing.
- V. Setting out.
- VI. Staking.
- VII. Tacking.
- VIII. Buffing the grain.
- IX. Finishing.
- X. Glazing.

LESSON 14.

General History of Shoemaking.

- I. Egyptian sandal.
- II. Roman sandal.
- III. Teutonic rude footwear.
- IV. French modifications.
- V. Indian moccasin.
- VI. Modern shoe.

LESSON 15.

Drawing of these different types of footwear.

LESSONS 16 AND 17.

History of Shoemaking in America.

- I. Massachusetts leader.
- II. Apprenticeship — Indenture paper.
- III. Value of shoes in Colonial times.
- IV. Ancient shoe laws.
- V. The itinerant shoemaker.
- VI. The first shoe shops.
- VII. Shop of a century ago.

LESSON 18.

Shoe Factories.

- I. First shoe factories.
- II. Labor in "teams."
- III. "Contract system."
- IV. Feeling of early shoemaker toward factory.
- V. Division of work in modern factory. Despatch office especially.

LESSONS 19 AND 20.

Shoe Machinery.

- I. Wooden peg.
- II. Pegging machine.
- III. Rolling machine.
- IV. Howe sewing machine.
- V. McKay sewing machine.
- VI. Goodyear welt machine.
- VII. Edge trimming and heel trimming machines.
- VIII. Lasting machine.
- IX. Pulling-over machine.
- X. Pictures of each machine.

LESSON 21.

Cutting Department.

- I. Hand cutting.
Work of pattern boys.
- II. Measuring of leather for cutters.
- III. Clicking machine.
- IV. Dinking.
- V. Skiving.

LESSONS 22 AND 23.

Stitching Department.

- I. Lining — making.
- II. Tip making.
- III. Perforating.
- IV. Closing and staying.
- V. Foxing.
- VI. Top stitching.
- VII. Button hole making.
- VIII. Vamping.
- IX. Toe closing.
- X. Work described by girls.

LESSONS 24 AND 25.

Methods in Shoe Manufacture

- I. Nailed.
- II. Pegged.
- III. Standard screw.
- IV. Turned.
- V. McKay.
- VI. Goodyear welt.
- VII. Work of IV., V., VI., described by boys who work there.

LESSONS 26 AND 27.

Following Examples of Shoes in These Stages of Manufacture.

- I. Turned shoe.
- II. McKay.
- III. Insole.
- IV. Shoe lasted and ready to have welt sewed on.
- V. Welt entirely sewed on and shoe ready to have outsole laid.
- VI. Shoe with outsole laid and channel tip turned up ready to be stitched
- VII. Shoe with sole stitched on.
- VIII. Heel trimmed and shoe ready for finishing.

LESSON 28.

Explanation of Terms Used in Shoemaking.

- I. List made out by pupils.
- II. Explanation given by pupils.
- III. Lists and explanation of pupils supplemented by teacher.

LESSON 29.

Tariffs.

- I. Shoe tariff in colonial times. Ebenezer Breed.
- II. Various changes.
- III. Present agitation.
- IV. On dye stuffs.

LESSON 30.

Reports From Trade Papers. (Subject to Change From Year to Year.)

Following are Typical of This Year.

- I. Visit of French Commission to Boston.
- II. Embargo on logwood.
- III. Packing industry in Brazil.
- IV. Russian war boot order.
- V. Imports and exports.
- VI. Hide-flaying in India.
- VII. Japan's leather industry.
- VIII. China — a possible market.
- IX. Study of table showing changes in prices from 1905 to 1912 to 1916.

LESSON 31.

Study of Various Circulars.

- I. Size of industry today.
- II. Care of shoes.

FACTORY WORK.

A TYPICAL PLAN FOR GENERAL IMPROVEMENT WORK IN A FACTORY CLASS.

1. General plan of year's work.
 2. Plan for one week.
1. Shop work.
 1. Manufacture of leather.
 2. History of shoemaking.
 3. Points of interest from current trade magazines.
 2. English — mostly oral work.
 1. Oral — aim.
 - (1) To train ear to recognize errors.
 - (2) To correct common errors.
 - (3) To acquire better enunciation.
 - (4) To increase vocabulary.
 - (5) To get habit of definite statements.
 2. Written — aim.
 - (1) To cultivate clearness.
 - (2) To cultivate simplicity and directness.
 - (3) To use dictionary for spelling, not guessing at words.
 - (4) To recognize sentence units.
 - (5) To test power of advanced pupils to investigate and report on subjects for themselves.
 - (6) To master better technicalities.

3. Lessons. (Oral.)

1. Conversation — questions and answers involving forms of troublesome verbs — lie, see, eat, ought, do, etc.
2. Conversation using “you” and other pronouns in combination with words ending in “d” or “t,” *e. g.*, What did she, where did you? Why don’t you? To stop slovenly speech, “Whache,” “whereju,” “why dontcher,” etc.
3. Oral reproduction after studying short stories with special attention to use of good words, that is, words full of meaning or picturesque, used in printed story.
4. Sentences containing slang or colloquial expressions to be replaced by good English words. Most people use slang because it is easy — sparse vocabulary.
5. Oral original definitions — teaching to classify before giving specifications.
6. Statements of work done by pupils, etc., for directness and accuracy.

4. Lessons. (Written.)

1. Friendly letter.
2. Business letter.
3. Amplification of thought suggested by talk on ethics.
4. Notes from dictation.
5. Testing knowledge (occasionally) of correct forms — taught orally.
6. Using words in sentences, synonyms or homonyms or antonyms.
7. For advanced classes.
 - a. Written reports on individual topics.
 - b. Study of arguments, exposition, description and narration for dominating characteristic.

Application.

Description.— The stitching room.

Narration.— A hero — to develop difference in treatment.

Exposition.

Argument.— Sale of liquor should be abolished. Immigration should be restricted.
 - c. Study of Anglo-Saxon and Latin — equivalent derivatives — to show value of each and increase vocabulary.
 - d. Danger of ambiguity in use of pronouns.
 - e. Value of subordination of thoughts.

5. Literature.

1. Reading from selected books.
2. For advanced classes.
 - (1) Growth of English language — influences.
 - (2) Brief résumé of American writers.
 - (3) Individual reports, *e. g.*, on

Plays of Shakespeare.

Famous artists.

Shoe topics.

Civic questions.

Household topics (girls).

Spelling.

Words from Boston list — no study. Ten verbs, ten adverbs each day — comparing results — insisting on correct spelling of words misspelled twice.

6 Hygiene.

1. Care of eyes.
2. Care of teeth.
3. Necessity of rest.
4. Necessity of exercise.
5. Foods — nutritious and non-nutritious.
 - (1) Kinds of cooking — value.
 - (2) Relative values of food.
6. Cleanliness of body.
7. Cleanliness in home.
 - (1) Sweeping.
 - (2) Value of sunlight.
 - (3) Airing bedrooms.
 - (4) Care of flush closets.
 - (5) Care of ice box.
8. Proper clothing.

7. Informative lessons — reports when possible by pupils — or presentation by teacher.

1. Based on current events, *e. g.*:
 - (1) The Tower of London. History.
 - (2) Partitioned Poland. (Geographical Magazine.)
 - (3) Roumania. (The Pivot State.) (Geographical Magazine.)
 - (4) The Balkan States. (Geographical Magazine.)
 - (5) Mexico. Ancient and Modern. (Geographical Magazine.)
 - (6) The World's Food Supply. (Geographical Magazine.)
 - (7) Little Serbia.
2. Based on holidays.
 - (1) Evolution of Santa Claus — Holidays of Ancient Greece.
 - (2) Columbus — Settlement of United States.
 - (3) Indians in North America. (Thanksgiving.)
 - (4) Lincoln. (Civil War.)
 - (5) Washington. (War for Independence.)
3. For advanced classes.
 - (1) Study of ancient civilization — contribution to the world — to develop breadth of mind and eliminate race and religious narrowness.
 - (2) Contribution of later civilization.

8. Arithmetic — Train for head work.

1. Daily systematic drill in four operations.
 - (1) To develop accuracy.
 - (2) To develop speed.
2. Four fundamental operations.
 - (1) Application to practical problems in pupil's work or home.
3. Fractions —
 - (1) Application to practical problems where such are likely to be used — to give facility in handling.

4. Surface measure.
 - (1) Applied to laying floors, concrete and other practical problems — acre.
5. Cubic measure.
 - (1) 231 cu. in. = gal. applied to measuring cans and tanks.
6. Percentage — applied to
 - (1) Simple interest.
 - (2) Simple discount.
 - (3) Bank discount (adv.).
 - (4) Commission.
 - (5) Duties (adv.).
 - (6) Taxes (m. and adv.).
 - (7) Insurance (m. and adv.).
7. Business forms (adv.).
8. Miscellaneous.
 - (1) Drawing to scale.
 - (2) Making graphs.
 - (3) Simple carpeting
 - (4) Simple papering.
 - (5) *et al.* prac. measurements.

Plan of Work for One Week.

Week of January 17.

Ethics.

Think of the next man to handle your work. Remember you all are working for the same concern. Be a co-worker in the fullest sense.

Spelling.

H. & M. Grade 8, minimum, 20-30.

L. Grade 6, minimum, 20-30.

English.

Low — Study anecdotes — choose good words, tell why you choose them.

Be ready to tell story to class, trying to incorporate some of selected words.

Medium — as for low.

High — Four forms of composition. Read part of *Treasure Island* to illustrate description.

Query — Is it a definite picture at a definite time?

Class to select words which add to picture or impression.

Arithmetic.

1. 10-minute drill.

2. High — Commercial papers — checks — note — writing of each — pupil explaining use of each.

Medium and low — Teach averages. Find average weights of hides in list in "Hide and Leather."

Medium — Relation of profit to investment, *e. g.*: Which is better business, buying for \$1.85 and selling for \$2.50, or buying for \$3.15 and selling for \$4.50?

Informative.

High — Egypt — Class reading from general history — Special topics — Story of Joseph — Egypt today.

Medium and low — Monroe Doctrine — apropos of Mexican question.
Literature.

High — Tale of Two Cities.

Medium — Silas Marner.

Low — Tom Paulding.

DRESSMAKING CLASS.

SHOP COURSE.

Projects.

The purpose of the course is to teach the child:

First.— The essentials of plain sewing and the use of patterns.

Second.— The amount that can be accomplished in as little as two hours a week.

Third.— The necessity of two or more garments for cleanliness and health.

Division of Work. Two Years. Seventy Lessons.

First Year.

Lesson 1.— Practice work. Seams, hemming and running stitches, etc.

Lesson 2.— Machine.— To learn to run and thread machine.

Lesson 3.— Work bag.— To determine ability to sew.

Lessons 4 and 5.— Bloomers.

Lessons 6 and 7.— Bloomers.— Second pair. Pupil cuts garment if far enough advanced.

Lessons 8 and 9.— Camisole.

Lessons 10 to 15.— Petticoat.

Lessons 16 and 17.— Camisole.— Second garment of this kind. Pupil cuts garment if far enough advanced.

Lessons 18 to 23.— Petticoat.— Second garment of this kind. Pupil cuts garment if far enough advanced.

Lessons 24 and 25.— Collar and cuff set.

Lessons 26 to 30.— Apron-dress.— Set in sleeves, cuffs, collar, belt, and pockets.

Lessons 31 to 35.— Blouse.— Smocked or plain.

Second Year.

Lessons 1 to 5.— Slip.— Pupil cuts garment if far enough advanced.

Lessons 6 to 10.— Slip.— Second garment of this kind. Pupil cuts garment if far enough advanced.

Lessons 11 to 15.— Nightgown.— Pupil cuts garment if far enough advanced.

Lessons 16 to 20.— Nightgown.— Second garment of this kind. Pupil cuts garment if far enough advanced.

Lessons 21 to 28.— Dress.— Simple cotton dress of voile, muslin or poplin.

Lessons 29 to 35.— Dress for child.— Simple cotton dress of voile, muslin or poplin.

The arrangement of lessons is based on the time the average girl takes to accomplish the work. A quicker worker gets more done in a year and a slower pupil falls behind.

DRESSMAKING CLASS.

SHOP COURSE.

Unit I.—12 Weeks.

I. Technical work.

a. Necessary tools. (Names and uses.)

Needles (size indicated by No.).

Thread (weight indicated by No.), cotton, silk, linen.

Button-hole scissors (emphasize proper use of gauge).

Tape measure (proper use).

Gauge for hems and tucks.

Electric iron.

Care of the ironing board.

Tracing wheel.

b. Kinds of stitches.

Name, describe and illustrate by drawing the following list:

Running.

Back.

Hemming.

Overcast.

Button-hole.

c. Kinds of seams.

Straight.

French.

Felled.

RELATED MATHEMATICS.

Unit I.—12 Weeks.

Measurements.

1. The yard stick and tape measure.

a. The fractional parts of an inch, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{5}{16}$, $\frac{7}{16}$.b. The fractional parts of a yard, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{6}$, $\frac{5}{6}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$.

c. Their equivalents in inches.

d. Measuring and cutting gauges for hems and tucks of varying widths.

e. Recording measurements. (Note-book work.)

2. The fractional parts of \$1.

 $\frac{1}{2}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{6}$, $\frac{5}{6}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, $\frac{1}{10}$.

3. Their equivalents in cents.

4. Miscellaneous.

Dozen, gross, ounce, pound, and those of their fractional parts in common use.

5. Practical problems.

a. Based on work in the trade. (Allowing for hems, seams, etc.)

b. Prices of goods.

c. Wholesale and retail.

d. The machine.

The study of the machine should occupy some part of every lesson for the remainder of this group of 12 lessons.

Parts.

Illustrate wherever possible.

Use of each part.

Wherever practical.

Illustrate wherever possible.

Care.

Oiling.

History of the development.

e. Terms.

(Used in connection with materials.)

1. Right and wrong. Test by selection from sample.
2. Up and down. Illustrate danger of cutting figured material.
3. Cutting along the thread. Illustrate by drawing and by sample.
4. Cutting across the thread. Illustrate by drawing and by sample.
5. Cutting the bias. Illustrate.
6. Selvage.
7. A breadth.

SHOP COURSE.

Unit II.—12 Weeks.

I. The garment and its parts.

The aim of this particular group of lessons is to make closer the connection between the trade and academic classes and to encourage the girl to make at least two each of the essential garments on the list. Before this group is started each girl will have made at least one garment; therefore the work will have a common foundation.

A. Camisole.

- a. Proper naming of parts, *e. g.*, front, back, shoulder strap.
- b. Names of seams, *e. g.*, under-arm, shoulder.
- c. Terms, *e. g.*, casing.
- d. Material suitable.

B. Bloomers.

- a. Kinds of stitches.
- b. Kinds of seams.
- c. Names of parts. Illustrate each by a drawing.
- d. Materials suitable.

C. Envelope chemise.

Same general outline.

D. Petticoat.

Same general outline.
Outline — additional terms.

Ruffle.

Tucks (use of gauge for tucks).

Placket.

E. Middy blouse.

F. Skirt.

RELATED MATHEMATICS.

Unit II.—Problems from the Garment in Process of Making — 12 Weeks.

A. Estimating the amount of material needed for:

- a. Ruffing (seant — full).
- b. Plaiting.
- c. Tucking.

B. Estimating the amount of material needed for each garment on the list.

e. g.—Envelope chemise.

2 breadths of cloth — 36 inches and 40 inches. Lace, etc.
Estimating the cost of material needed for each garment.

e. g.—Camisole.

$\frac{3}{4}$ yard of longcloth at 35 cents, 38 inches around top; lace,
10 cents per yard; 1 yard of lace for shoulder straps.

D. Comparison of prices of:

- a. Garments made.
- b. Garments bought.

Notice.—Take into consideration length of time each kind will last.

Unit III.—11 Weeks.

Patterns.

A. Kinds.

Each girl should know at least *five* of the most popular.

B. Proper selection in regard to:

- a. Size.
- b. Suitability for purpose.
- c. Suitability for material.

Note.—Teach the proper way to take and record all measurements for a pattern and test by constant practice.

C. The envelope.

Much practice in reading the envelope to find the information given about:

1. Pieces of the pattern.
2. Possibilities of choice among the pieces.
3. Directions for laying on the pattern.

D. The marking.

- a. Notches.
- b. Perforations (large and small).

E. Pieces.

Much practice in recognizing the individual pieces of the pattern. Verify all answers from the diagram on the envelope.

Unit III.—11 Weeks.

Patterns.

Use front of envelope for material.

A. Cost of garment.

1. For varying ages.
2. With varying widths of cloth (get prices from samples of goods suitable for the garment).

B. Amount of material used.

1. Lay on various pieces of the pattern in different arrangements — measure each.
2. Estimate the saving in material.
3. Estimate the saving in money.

C. Estimate the saving in material.

1. If exact amount called for by the pattern is bought.
2. If the nearest yard.

D. Cost of trimming.

SHOP COURSE.

Second Year.

Unit I.—12 Weeks.

Patterns.

- A. Review of past term's work.
- B. Reading of the fashion sheet.
- a. Proper description of garments, *e. g.*, a two-piece skirt or *e. g.*, a two-piece skirt with tunic.
 - b. Importance of information given, *e. g.*, width around the bottom of the skirt.
- Much reading and description from fashion sheet; illustrate by drawing wherever possible.

C. The envelope.

If previous work has been successful the girl should be able to understand the information given about the pieces of the pattern, etc.

Additional work.

Varying widths of material. The table of widths and corresponding amounts upon the envelope.

D. The pattern in detail.

Test knowledge by having patterns laid upon cloth. Doll's patterns are fully marked and easy to handle.

Duplicates of the patterns which the girls handle in the trade room and which they ought to retain for personal use should be made.

RELATED MATHEMATICS.

Second Year.

Unit I.—12 Weeks.

Patterns.

- A. Review work of previous term.
- B. Widths of material.
- Estimate from the pattern and from prices on samples the amount saved by using wide material.
- e. g.*—Sleeve — 19 inches long.
Cloth — 27 inches wide requires 2 breadths.
Cloth — 40 inches wide requires 1 breadth.
- C. Amount of material required for garments.
- e. g.*—A two-piece skirt, 36 inches finished — 2 yards around lower edge. How much material required?
- e. g.*—Skirt—2 yards around the lower edge requires how many breadths of 27-inch material? Of 36-inch material?
- e. g.*—Length of skirt mentioned in preceding example is 40 inches finished. How many yards of material required?
- e. g.*—Cost of material, etc. Indefinitely.

Unit II.—12 Weeks.

The garment and its parts.

- A. The princess slip.
 - a. Review.
 1. Kinds of seams — stitches.
 2. Facings, casings, tucks, ruffles, etc.
 - b. Illustrate each part, placing the notches and markings where they would appear on the pattern.
 - c. Materials suitable.
- B. The apron.
- C. The nightdress or pajamas.
- D. The dress.

Unit II.—12 Weeks.

The garment and its parts.

- A. Estimate costs of.
 1. Princess slip.

Measure each part of garment. Measure each part of the pattern. Verify measurement. Find the cost.
 2. Smock.
 3. Apron.
 4. Dress.
 5. Of labor in work rooms.

(Various operations on the dress have various prices).
- B. Make out bills for garments, reckoning on Material.
Findings.
Labor.

Unit III.—11 Weeks.

- A. Care of clothes.
 - a. Mending.
 - b. Hanging up when not in use.
 - c. Brushing.
 - d. Removing stains and spots from goods not washable.
- B. Selection of clothes.
 - a. Appropriateness.
 - b. Durability.
 - c. Economy.
- C. Hygiene of clothing.

Unit III.—11 Weeks.

1. Profit and loss.
2. Trade discount.
3. Commercial papers.
 - a. Bills.
 - b. Receipts.
 - c. Checks.
 - d. Money orders.
 - e. Notes. (Optional.)

DRESSMAKING CLASS.

RELATED ENGLISH.

All phases of the work in the trade room can be used as subjects for oral and written English. Much of the pattern work, especially that with the fashion sheet, can be used for oral English and made the subject of short descriptions. Different processes as they occur in the trade work can be used as the subjects of short expositions.

Trade terms.

Definition. Spelling.

Letters.

Application (for a position as apprentice or errand girl, etc.). Reference.

Requesting payment. Ordering goods. Making complaints. Answering complaints. Suggesting a costume. Making an appointment. Famous dressmakers. Magazines of fashion.

TEXTILES.

Aim:

1. To teach the girl usefulness of material — qualities affecting usefulness — weave — dressing — dyeing.
2. To teach the girl to distinguish kinds of material — value of material.

Introduction.

This work should be simple and brief; but little more than a review of the girl's previous information.

Fibers.

Cotton, wool, silk, flax and mohair.

Sources (chief).

Terms.

Warp, filling sizing (purpose), shrinking, dyeing, spinning, printing and bleaching.

The story of cotton, wool, silk and flax.

Very simple unless girls have a background of experience in manufacturing towns or textile industries. Pictures can be used to advantage.

Cotton.

All work should be done from samples which should be pasted into notebooks for reference.

A. White.

Distinguish between bleached and unbleached.

The process of bleaching (if practical).

Kinds.

Materials which show a difference in weight (voile, muslin, longcloth and flannel).

Materials which show a difference in weave (cotton corduroy, pique, dimity).

Application.

Constant practice in distinguishing among samples for

a. Too much filling.

b. Poor quality thread.

List materials (white) from cotton. Test knowledge by sample.

B. Printed.

Explain process of printing if practical.

Method of distinguishing printing from dyeing.

Sample work.

C. Dyed.

Process if practical.

Test for fast colors.

D. Mercerized. (Optional.)

Process (if practical).

Select samples of mercerized material.

NOTE.— It is not necessary for the girl to know the steps taken in any process, but it is necessary to know the result obtained by it.

Wool.

Test for cotton mixed with wool.

Shoddy.

Names of most important wool fabrics.

Silks.

Kinds.

Distinguish the most important.

Vegetable silks — artificial silks.

EQUIPMENT FOR DRESSMAKING CLASSES OF TWENTY PUPILS.

Five foot machines.

Two electric irons and boards.

Low tables, with good lamps swung about 3 feet above the tables.

MILLINERY CLASS.

SHOP WORK.

Unit I.— Fall Work.— 10 Weeks.

Lesson 1. Necessary tools.

Pliers, tapeline, millinery needles, millinery thread, linen thread, wire (covered, uncovered, tie, brace, ribbon), cement.

Lessons 2 to 5. Parts of the hat.

A. Brim (upper and under). Illustrate by drawing.

Measure and record measurements.

B. Crown (top and side).

Illustrate by drawings. Measure and record measurements.

C. Lining. (Crown tip and side crown.) Placing.

D. Terms.

1. Head size (emphasize proper shape). 2. Facing. 3. Binding. 4. Trimming. 5. Edgewire. 6. Base of crown (distinguish from head size).

Lessons 6 to 9. Frames.

Kinds.

A. According to material (buckram, rice net, wire, cap lace).

B. According to structure (one piece, two pieces). Illustrate by drawing.

Lesson 10. Types of stitches.

Back, running, slip, lacing, saddler's feather.

Terms.

Distinguish between: Facings (plain, shirred, bias), ruffles, plaits, folds (straight, cross-wise, bias) (plain, French, milliner's), tucks.

Unit II.—Spring Work.—8 Weeks.

Lesson 11. Review of fall work for:

Terms, methods of taking measurements, recording measurements, proper use of tools.

Lessons 12 to 14. Types of shapes.

Sailors, turbans, toques, bonnets, etc. Illustrate, measure and record measurements; emphasize the fact that position of crown affects shape of hat.

Types of brims.

Regulation, straight, drooping, mushroom, rolling; emphasize tension of edgewire affects shape of brim. Illustrate and measure.

Types of crowns.

Square, sloping, round or dome, bell, tam o'shanter.

Illustrate, measure and record measurements.

Lesson 15. The wire frame.

Parts. (Brace wire, stay wire, tie wire.)

Lessons 16 and 17. Trimming.

A. Types of hats. (Dress, tailored, trimmed.)

B. Character of trimming. (To indicate use of hat.)

C. Use. (To render it becoming.)

D. Kinds. Ribbon (bows, bands, rosettes), flowers, feathers, novelties.

E. Placing of trimming.

Lesson 18. Color.

Use. Trimming should be of prevailing color of the hat, and give the impression of one color.

Terms. (Shade, tone, tint.)

NOTE.—No student, even of the highest grade, can accomplish this work in one season. The second year work follows the order of the first group of eighteen lessons enlarging the work of the first year. All work should be carefully preserved in a notebook, so that this work may be the foundation upon which to build the work of the second year.

RELATED MATHEMATICS.

I. Measurements.

A. The yard stick and tape measure.

1. The fractional parts of a yard: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{6}$, $\frac{5}{6}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$.
2. The fractional parts of an inch: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, $\frac{1}{16}$.
3. Equivalents of parts of yards in inches.
4. Practical measurements from the hat in making.

B. The meter.

For girls only who are in the trade.

C. The circle.

1. Terms (radius, diameter, circumference, pi).
2. Application.

To find the edge of a hat, given the diameter.

To find the lining, given the head size.

NOTE.—High grade girls could do simple work with formulas.

Low grade girls may call pi, 3, and add 2 inches for lapping and sewing.

D. Miscellaneous.

Dozen, gross, ounce, pound, and their fractional parts, as the need arises.

II. Practical problems from the hat in process of making.

A. Estimating amount of material for:

1. Facings. (*See Dressmaking.*)
2. Ruffles. (*See Dressmaking.*)
3. Bias strips and folds. (*See Dressmaking.*)
4. Tucks.

B. Estimating costs of such materials.

III. Estimating costs.

- A. Of milliner's supplies (wire, buckram, velvet, etc.).
- B. Of hat trimmings.
- C. Of labor.
- * D. Of imported hats (duties).
- * E. Of hats made in the workroom.
- * F. Of factory made hats.

IV. Trade discount.

(*See Dressmaking.*)

V. Profit and loss.

(*See Dressmaking.*)

VI. Commercial papers.

Bills, checks, receipts, deposit slips, notes, money orders.

RELATED ENGLISH.

I. Oral and written English.

All details of the trade work may be used as the subjects of compositions, both oral and written.

e. g. Qualities necessary for a milliner.

e. g. Use of color.

e. g. Description of a hat.

II. Business letters.

1. Letters of application.
2. Letters ordering goods.
3. Letters requesting payment.
4. Letters making an appointment.
5. Letters making a complaint.
6. Letters in reply to complaints.

III. Trade terms.

Definition. Spelling.

* Marks problems for girls actually in the trade.

- IV. The story of the hat.
- V. World famous milliners.
- VI. Millinery magazines.

TEXTILES.

- I. Terms. (*See Dressmaking.*)
- II. Fibers. (*See Dressmaking.*)
- III. Materials studied from the viewpoint of:
 - Preparation. Durability. Suitability for their particular purpose in millinery.
 - A. The hat.
 - 1. Foundation. (Buckram (sizing of glue), cape lace, rice net.)
 - 2. The lining.
 - Muslin. Mull. Crinoline.
 - 3. The covering.
 - Velvet (chiffon, panne, velveteen, corduroy).
 - Maline. Chiffon. Crepe (georgette de chine).
 - Lace. Straw and straw braids (use of shellac in preparation).
 - 4. Trimming.
 - Ribbon. Preparation of flowers, feathers, novelties.
 - B. Color.
 - 1. Dyeing.
 - 2. Bleaching.

POWER MACHINE CLASS.

SHOP WORK.

Lessons.	OPERATIONS.
1.....	1. Mechanical use of machine.
2-4.....	2. Stitching without thread and getting accustomed to power and treadle.
5-6.....	3. Threading needle and placing bobbin.
7-9.....	4. Stitching short lengths (16 inches for practice; striped material better, as can follow stripes).
10-12.....	5. Simple apron.—Stitching straight seams, using gauge, plain material (2 or 3 piece apron, etc.).
13-15.....	6. Winding bobbins with care and use of transmitter.
16.....	7. Trimming, or cutting threads.
17-19.....	8. Different kinds of seams.
20-22.....	9. Hemming on straight edge, short strips: $\frac{1}{8}$ -inch, $\frac{1}{4}$ -inch, $\frac{1}{2}$ -inch.

Lessons.	OPERATIONS.
23-25.....	10. Round apron.— Hemming on curved edge.
26-28.....	11. Continued lessons to acquire correct method of holding materials.
29-30.....	12. Care of machine: Cleaning, oiling, etc.
31-32.....	13. Rethreading machine, adjust tension.
33.....	14. Adjustment of stitch according to fineness of material, and placing needle.
34.....	15. Caps and aprons.— Experimental work with varied stitching; shirring and change of stitch.
35-37.....	16. Special hemmers; 3-inch hem.
38.....	17. Hemming 1-inch, $\frac{1}{2}$ -inch, $\frac{1}{4}$ -inch hems.
39-43.....	18. Binding: $\frac{3}{4}$ -inch, $\frac{1}{8}$ -inch.
44-46.....	19. Banding for special work.
47-51.....	20. Hemstitching machine: Threading, winding bobbins, and practicing short lengths.
52-54.....	21. Hemstitching on seams: <i>i. e.</i> , shoulder seams of underwear, etc.
55-60.....	22. Attachment for hemstitching machine; adjustable hemmer and resetting.
61-64.....	23. Zig-zag machine.
65-74.....	24. Tucking machine.
75-78.....	25. Button-hole machine: Care, threading, treadle, lever, etc.
79-84.....	26. Pressing and examining.
85.....	27. Advanced pupils are put on better grade of work, such as crepe de chine, wash satin, lace, and insertion.

POWER MACHINE CLASS.

RELATED WORK.

(Part time correlated work to be used with general arithmetic, civics and hygiene. The demand of the trade work directly determines the number of times each subject is taken, and the amount of time spent on it, and the sequence of topics.)

Approximate Number of Lessons.	SUBJECTS.
1.....	1. Qualities necessary for power machine worker. Quickness of motion. Ability to understand orders. Neatness. Accuracy.
1.....	2. Opportunities in power machine trade.
2.....	3. Laws relating to factory work. Hours of employment. Dangerous machines. Fire laws. Employer's liability.
2.....	4. Unions. Advantages and disadvantages.
10.....	5. Problems in cost of making garments.
1.....	6. Salary. Discussion as to value of time work and piece work.
1.....	7. Employee's dress for work.
1.....	8. Factory conditions. Light, stimulating lunch. Rest room. Recreation.
12.....	9. Names of parts of machines. Treadle; tension; bobbin winder; bobbin; gauge; foot; belt; transmitter; knee-press; skirt guard.
1.....	10. Names of attachments. Hemmer; binder.
2.....	11. Care of machine at work and at school.
2.....	12. Names of different operations. Plain stitching; hemstitching; button-holing; shirring; tucking.
3.....	13. Kinds of seams. Raw; French; flat-felled.
6.....	14. Measurements. Fractional parts of yard, inch, foot. Halves, quarters, eighths, sixteenths.
35.....	15. Textiles. For personal use in home. Knowledge of fabrics at work. For detail see textile topics under dressmaking.

EQUIPMENT FOR POWER MACHINE CLASSES OF TWENTY PUPILS.

- 15 Single-needle machines.
- 2 Double-needle machines.
- 2 Hemstitching machines.
- 1 Overlook or zigzag (small attachment made for special work).
- 2 Electric irons and boards.
- 2 Two horse power motors.

HOUSEHOLD ARTS CLASS.

GENERAL SUBJECTS.

- 1. Cleanliness.
 - Person.
 - Work.
 - Home.
- 2. Kitchen.

Furnishing.	Cleanliness.
For economy.	Care of kitchen.
For efficiency.	Care of stoves.
	Care of refrigerator.
- 3. Housework.
 - Sweeping; dusting; scrubbing; washing; table setting and serving; bed making; general cleaning.
- 4. Food.
 - Preparation of food.
 - Methods of cooking.
 - Classification and function.
 - Buying, considering cost in relation to food value.

DIVISION OF WORK.—TWO YEARS.—SEVENTY LESSONS.

Canning, preserving, pickling. (10 lessons.)

Breakfasts. (20 lessons.)

Cooking of cereals, muffins, toast, eggs, fish balls, doughnuts, pancakes, dried fruits.

Dinners. (20 lessons.)

Meat, fish, vegetables; meat and fish soups; meat substitutes; meat extenders; salads; puddings; pies.

Suppers. (20 lessons.)

Cream soups, cheese dishes, egg dishes, bread, biscuits, salads, use of leftovers, gingerbreads, cookies, cakes, desserts, sauces, cooking of fruits.

Division of Class.

Each lesson the class is divided in two groups, which alternate the following session.

1. Housekeepers.

Repetition of work in each lesson.

Sweeping; dusting; dishwashing; cleaning kitchen; washing towels; table setting and serving.

2. Cooks.

ILLUSTRATIVE TYPES OF LESSONS.

I.

Breakfast. Cream of wheat with dates. Toast. Coffee.	Explanation of measurements. Effect of heat on starch. Effect of cold on starch. General rule for cooking cereals. Ways of making coffee.
Dinner. Baked rice and peanut butter. Spinach. Chocolate bread pudding.	Value of meat substitutes. General rule for cooking green vegetables. Review of the effect of heat on eggs. Application to cooking of pudding. General rule for bread pudding. Possible variations.
Supper. Escalloped potatoes and cheese. Apple sauce. Gingerbread	General rule for escalloped dishes. Value of cheese. General rule for making fruit sauces. Making gingerbread with baking soda and sour milk. Study of action of leavenants. Review of oven temperatures.

II.

Breakfast. Stewed prunes. Rolled oats. Muffins.	Classes of fruits (food fruits, flavor fruits). Value of dried fruits. General rule for cooking dried fruits. Review of cooking cereals. General rule for muffins. Use of baking powder leavenant. Oven temperatures.
Dinner. Boiled fish, egg sauce. Boiled potatoes. Custard pudding.	General principle of boiling. Rule for boiling fish. Review cooking potatoes. General rule for custard. Effect of heat on eggs. Application to cooking of custard.
Supper. Stuffed tomato, cream sauce. Peanut butter muffins. Cornstarch pudding.	Use of leftover for stuffing vegetable. Review making white sauce. General rule for cornstarch pudding. Experiments to show methods of making and mixing for smooth result. Application of lesson on cooking starch.

III.

Breakfast.	Value of flavor fruits.
Baked apple.	Cooking of apples.
Oatmeal.	Cooking of coarse cereals.
Cream toast.	General rule for white sauce.
	Methods of making.
Dinner.	Review cooking of rice.
Turkish pillau.	Small amount meat to extend flavor
Beet greens.	to bulk obtained by using rice.
Caramel custard.	Value of green vegetables.
	Cooking of green vegetables.
	Melting of sugar to caramel stage.
	Review making of custard.
Supper.	Making of a meat soup.
Scotch broth.	General rule for making soup.
Peanut butter muffins.	Method of extraction of juice.
Baked apple pudding.	Discussion of cuts to be used.
	Review making of muffins.
	Review baking powder biscuit.
	Using mixture as crust.

IV.

Breakfast.	Review cooking dried fruits.
Stewed apricots.	General rule for griddle cakes.
Corn meal griddle cakes.	Comparison pour and drop batter.
	Frying griddle cakes.
Dinner.	General rules for stews.
Beef stew with dumpling.	Value long, slow cooking.
Cottage pudding, chocolate sauce.	General rule for dumpling.
	Comparison between dumpling rule
	and baking powder biscuit.
	Cooking of dumplings.
	Method of mixing plain cake.
	Review oven temperatures.
	General rule for sweet sauces.
Supper.	General rule for cream soups.
Potato soup.	Review cooking vegetables.
Corn baking powder biscuit.	Value cream soups.
Peanut cookies.	Review baking powder biscuit.
	Making drop cookies.
	Comparison soft dough and drop
	batter.

CANNING, PRESERVING AND PICKLING ARE INTRODUCED ACCORDING TO
SEASON. ILLUSTRATIVE TYPES OF LESSONS.

I.

Canning tomatoes.

Cold pack method.
Open kettle method.
Principles involved.
Sterilization.
General rule for canning.

II.

Preserving peaches.

Making of sugar syrup.
Preserving by cold pack method.
Preserving by open kettle.
Necessity of thorough sterilization.

III.

Jelly-making.

General rule for jelly-making.
Extraction of juice.
Sterilization of glasses.
Preservation by means of sugar.
Pectin test.

EQUIPMENT FOR COOKING CLASSES OF TWENTY PUPILS.

- 4 Gas stoves.
- 4 Large cooking tables.
- Double sink.
- Refrigerator.
- Miscellaneous pans and dishes.

ELECTRICAL CLASS.

SHOP WORK.

In the shop each pupil works from his own blueprint lesson sheet. The lesson sheets show the wiring diagrams and explain in detail the theory, necessary trade mathematics, and the practical applications involved in that lesson. The average boy can complete one lesson or exercise in two hours or less. As soon as the individual pupil satisfactorily completes the work laid out for him on one lesson sheet he begins on the next sheet.

Each set of lessons forms a unit course. Each pupil is required to complete Unit A and then, subject to the approval of the instructor, he may take any of the other units.

Unit A.—Elementary fundamentals and low tension work.

12 lessons on bell and annunciator work.

5 lessons on telegraph and telephone work.

Unit B.—9 lessons on house wiring.

Unit C.—9 lessons on conduit work.

Unit D.—5 lessons on molding work.

Unit E.—6 lessons on cleat work.

Unit F.—10 lessons on generator, motor and switch board work.

UNIT A.—ELEMENTARY FUNDAMENTALS AND LOW TENSION WORK.

*Lesson 1A.**Theory.*

Cause of flow of electricity.
Theory of voltage.
Answering questions on theory or on practical work.

Practical Work.

Studying flow of water.
Studying flow of air.
Studying flow of electricity.
Detecting presence of electricity by use of compass.
Making drawings of practical work done.

Lesson 2A.

A circuit.
A series circuit.
A multiple circuit.
Battery symbol.
Symbols for splice and crossover.
Study of volt-ammeter.
Answering questions on advantage of series and multiple circuits.

Making a circuit by means of a dry cell and some wire.
Connecting old dry cells in series.
Connecting old dry cells in multiple.
Making tests with volt-ammeter.
Three and two cells in series and three and two cells in multiple and single cell.
Reporting tests in volts and amperes.

Lesson 3A.

Theory on which a bell works compared with theory of all machines in electrical line.

Making drawing of a bell circuit, including inside wiring of bell, push button and one cell of battery.
Putting up bell, button and cell of battery and wire in working order.
Tracing out inside wiring of bell.
Making splices and fastening of wires under screws and binding posts in proper manner.

Lesson 4A.

Reasons for scale drawings.

Learning divisions on carpenter's 2-foot folding rule.
Explanation of scale drawing.
Measuring lines drawn to different scales and writing answers.
Draw lines to scale from specifications.

Lesson 5A.

Study of trade symbols for bells and buttons. Study of bell circuit where bell is controlled by two buttons in series. Study of bell circuit where bell is controlled by two buttons in multiple. How to make drawings.

Making a drawing from specifications of a simple cell circuit on the scale of $\frac{1}{2}$ inch to the foot.
Installing work from drawing.
Taking down work and return of material.

*Lesson 6A.**Theory.*

Principle of bell wiring for two-tenement house (from front doors only). Correcting an improper scale drawing.

Practical Work.

Making a corrected drawing.
Installing work from corrected drawing.

Lesson 7A.

Principle of bell wiring for two-tenement house (from front and rear doors). Use of wires common to more than one article.

Interpretation of specifications.
Installing work from specifications.

Lesson 8A.

One bell controlled from three different places by means of multiple wiring.

Making a scale drawing of three buttons wired in multiple.
Installing work.

Lesson 9A.

One bell controlled by three buttons in series. Theory of series for electric lighting explained.

Measuring a practical scale drawing denoting heights of buttons and bells. Estimating stock necessary for work.
Installing work.

Lesson 10A.

Ring and return ring, bell system by use of three wires. Theory of a short circuit.

Installing work from a practical scale drawing.

Lesson 11A.

Ring and return ring, bell system by use of one wire and ground. Theory of ground wire.

Measuring drawing and installing work according to measurements.
Use of pipe for ground connections.

Lesson 12A.

Annunciator wiring. Advantage of annunciator system.

Installing an annunciator and three push buttons.

Lesson 13A.

Telegraphy. Theory of telegraph compared with that of bell. Naming parts of telegraph instrument and tracing out the wiring principle of same.

Installing two telegraph instruments, using a trade drawing.

Lesson 14A.

Telegraph relays.
Reason for relays.
Tracing wiring system.

Installing telegraph instruments and relays, using a correct trade drawing.

*Lesson 15A.**Theory.*

Police and fire alarm system.

Practical Work.

Installing bell controlled by a push button and relay.

Lesson 16A.

Induction coil.

Telephone receiver.

Telephone transmitter.

Installing telephone induction coil, receiver and transmitter properly connected.

Lesson 17A.

Telephones.

Installing a two-party phone system.

UNIT B.—HOUSE WIRING.

Lesson 1B.

Reasons for outlet box.

Installing outlet box as directed, using a practical trade drawing.

*Lesson 2B.*Insurance rules on inside wiring;
knob and tube type of wiring.Installing outlet box and a circuit from cut-out cabinet to outlet.
Wiring as per rules for knob and tube work.*Lesson 3B.*

Knob and tube work, showing use of single pole flush switch.

Installing work as required by blueprint according to insurance rules.

Lesson 4B.

Interpretation of trade symbols and specifications.

Installing work, using knob and tube and also pipe and junction boxes.

Lesson 5B.

Double pole snap switch. Interpretation of specifications.

Installing work, using knob and tube work.

Lesson 6B.

Reason for use of Bx.

Installing Bx, as per drawing and as per insurance rules.

Lesson 7B.

Explanation of grounds on Bx wiring.

Installing work and testing for grounds.

Lesson 8B.

Explanation of a junction box.

Installing work as shown by blueprint.

*Lesson 9B.**Theory.*

Reasons for different parts of fixtures.

Practical Work.

Assembling a fixture. This fixture drawing and fixture used with all B lessons.

UNIT C.—CONDUIT WORK.

Lesson 1C.

Cutting a pipe to measurement.
Cleaning pipe. Reasons for same.
Use of oil explained.

Cutting and cleaning a piece of pipe.
Use of tools and oil.

Lesson 2C.

How to make a single offset in pipe. | Making an offset.

Lesson 3C.

How to make a double offset. | Making a double offset.

Lesson 4C.

How to make an elbow. | Making an elbow.

Lesson 5C.

Interpretation of trade symbols.
Reasons for use of conduit in electrical installations. Single pole switch wiring.

Installing conduit work and wiring for one light controlled by a single pole snap switch.

Lesson 6C.

Use of double pole snap switch.

Installing work called for in blueprint according to insurance rules for conduit work.

Lesson 7C.

Use of three-way snap switches.

Installing work called for in blueprint.

Lesson 8C.

Use of two three-way and one four-way snap switches.

Installing work called for in blueprint.

Lesson 9C.

Use of an electrolier snap switch.

Installing work called for in blueprint.

UNIT D.—MOLDING WORK.

Lessons 1, 2, 3, 4, 5 D.

Explain use of wood and metal moldings.
Reasons for use of same. Rules governing use of same.

Installing work as called for in blueprints, which includes work on the following types of switches: Single pole, double pole, three-way, four-way and electrolier.

UNIT E.—CLEAT WORK.

*Lessons 1, 2, 3, 4, 5, 6 E.**Theory.*

Explain use of cleats for exposed wiring. Reasons for use of same.
Rules governing use of same.

Practical Work.

Installing work as called for in blue-prints, which includes the different types of switches.

UNIT F.—GENERATOR, MOTOR AND SWITCH BOARD WORK.

Lesson 1F.

Use of series circuit in electric lighting systems.
Amperes, volts, watts.
Ohms Law.

Testing with voltmeter different candle power lamps at different voltages while connected in series. Reporting on tests.

Lesson 2F.

Use of multiple circuit in electric lighting systems.
Result of a load thrown on to a generator.
Electromotive force explained.

Use of electric light plant and switch board for making test.
Readings of switch board instruments taken to determine load.

Lesson 3F.

Resistance.
Conductors and nonconductors.

Testing conductivity and nonconductivity of different types of materials by use of test lamp on electric light circuit.
Making resistance tests with different size wires.

Lesson 4F.

Bell test set.
Electric test lamp.
Cable testing.

Testing cable by bell test set.
Testing cable for trouble with electric test lamp.
Testing with test lamp for grounds on electric light circuit.

Lesson 5F.

Magnetism.
Poles of magnets.
Lines of magnetic force.
Magnetic fields.
Armature of magnet.
Determining location of north magnetic pole of the earth.

Use of magnets and iron filings.
Making temporary magnets.
Making permanent magnets.
Comparison of armatures.
Study of compass.

*Lesson 6F.**Theory.*

Generator.
Solenoid.
Electro magnet.
Polarity of fields.
Armature of generator.
Helix.
Lines of magnetic force in generators and motors.
Residual magnetism.

Practical Work.

Taking apart generator on bench and testing as directed by blue-printed sheets.
Answering questions after tests.

Lesson 7F.

Mechanical and electrical energy.
Types of generators.
Parts of generators.
Application of magnetism to generators.
Measuring output of generators.
Use of speedometer.

Application of changing mechanical energy to electrical energy and *vice versa* by means of motor generator set.
Connecting and running of D. C. and A. C. generators and motors.
Testing voltage given by generators when fields are excited by different number of cells.
Taking speed of motors and generators.

Lesson 8F.

A. C. generators, two and three phase types.
Transformers and use of same.

Connecting A. C. generators.
Using transformer for stepping up and stepping down the voltages from generators.
Testing voltage with portable voltmeter.
Noting result and effect on lamps of different voltages.

Lesson 9F.

Switch board.
Storage battery.
Polarity.
Ammeter shunt.
Ground detector lights.
Pilot lights.
Rheostats.

Charging and discharging of storage battery.
Testing polarity.
Making proper connections to switch board for charging battery.
Learning switch board while battery is charging.

Lesson 10F.

Switch board.

Making drawing of rear and front view of direct current switch board.
Showing different parts requested in blueprint lesson sheet.

EQUIPMENT USED IN ELECTRICAL SHOP.

A small, practicable electric lighting plant, including motors, generators and switch board.

Walls and partition panels of soft wood, giving the essential construction of a small two-story house.

Demonstration generators, motors, starting boxes.

Stock rack, wood and metal moldings, conduits with fittings, conduit and unilet fittings.

Tools and materials are of the best grade. It is poor economy to use the cheaper grade.

TOOLS AND MATERIALS USED IN ELECTRICAL SHOP.

A.

2 six-drop annunciators.

B.

3 dozen universal switch bases.
 1 expansion bit.
 1 bit extension.
 4 sets of bits.
 6 bitstocks.
 6 dozen T. & B. pipe bushings.
 1 dozen Burns bushings.
 1 dozen Bx bushings.
 5 dozen $\frac{1}{8}$ -inch socket bushings.
 2 dozen $\frac{3}{8}$ -inch socket bushings.
 5 dozen 3-inch vibrating bells.
 2 dozen brass key sockets.
 1 miter box and saw for same.
 1 dozen metal molding outlet boxes.
 5 pounds $\frac{3}{4}$ -inch No. 20 brads.
 10 pounds $1\frac{1}{2}$ -inch No. 14 brads.
 2 dozen 4-inch round wood fixture blocks.
 10 dozen electric wood push buttons.
 $\frac{1}{2}$ dozen unilet switch boxes.
 2 dozen T. & B. switch boxes with extra outlet covers.
 1 dozen Renim outlet boxes.
 100 feet Bx.
 3 dozen 10-inch hack saw blades.
 50 dry batteries.

C.

1 dozen 2587 cut-outs (GE).
 3 dozen 1935 cut-outs (GE).
 2 dozen 2965 cut-outs (GE).
 1 dozen 8020 cut-outs (GE).
 2 dozen 2199 cut-outs (GE).
 2 dozen 8042 cut-outs (GE).
 1 dozen 62135 cut-outs (GE).
 2 telephone choke coils.

2 ground clamps.
1 Beaver pipe cutter.
5 dozen pipe clips, $\frac{1}{2}$ -inch.
5 dozen $\frac{1}{2}$ -inch pipe couplings.
1 spark coil.
50 feet cable cord.
1 dozen assorted sized wood chisels.
4 small cold chisels.
150 three-wire porcelain cleats.
4 telephone induction coils.
1 dozen switch type condulets.
2 dozen type A condulets (porcelain covers).
1 dozen type J condulets (porcelain covers).
2 dozen type C condulets (porcelain covers).
2 dozen type L.R. condulets (porcelain covers).
2 dozen type L.L. condulets (porcelain covers).
1 dozen B type condulets (porcelain covers).
2 dozen type T condulets (porcelain covers).
300 feet $\frac{1}{2}$ -inch malleable steel conduit.
300 feet lamp cord.

D.

1 set of Armstrong dies and diestock.
6 dozen screw drivers, assorted sizes, 4-inch, 6-inch, 8-inch.
1 Millers Falls twist drill and three sets of drills.
3 bitstock screw drivers.

E.

1 dozen Bx elbows.
2 dozen metal molding elbows (flat).

F.

6 one-light electric bracket fixtures.
6 one-light pendant fixtures.
2 half-inch pipe to metal molding fittings.
12 crow feet, $\frac{3}{8}$ -inch.
6 hack saw frames.

G.

6 lamp guards.
40 feet $\frac{3}{8}$ -inch gas pipe.

H.

1 dozen Maydole claw hammers.
3 machinist hammers.
13 fixture hickies, $\frac{3}{8}$ -inch by $\frac{3}{8}$ -inch, female.
2 Lakin pipe hickies.

I.

1 soldering iron.
10 telegraph sounder and key instruments.
4 telegraph relay instruments.

J.

1 dozen $\frac{3}{8}$ -inch by $\frac{3}{8}$ -inch female insulating joints.

K.

200 No. 5 $\frac{1}{2}$ split knobs.

75 E. knobs.

24 jack knives.

L.

1 110 arc light.

2 dozen 110 4 C. P. lamps.

2 dozen 110 8 C. P. lamps.

2 dozen 110 16 C. P. lamps.

2 dozen 110 32 C. P. lamps.

100 feet $\frac{1}{4}$ -inch circular loom.

2 dozen small wire lugs.

M.

250 feet metal molding.

200 feet No. 19 2-wire wood molding.

12 battery volt-ammeters.

1 three-reading volt-ammeter 0-150, 0-15 amps. To read on A. C. or D. C. current.

2 mallets.

N.

75 $\frac{1}{2}$ -inch lock nuts.

15 chase nipples, $\frac{1}{2}$ inch.

P.

5 dozen 10-amp. 125-v. fuse plugs.

2 dozen 20-amp. 125-v. fuse plugs.

2 pounds no-corrode soldering paste.

4 burner pliers (8 inches).

3 dozen 6-inch electrician's pliers.

R.

6 5-inch McCallum insulating rings.

1 dozen molding receptacles.

2 dozen conduit receptacles.

100 No. 9171 cleat receptacles.

2 dozen cleat rosettes.

2 $\frac{1}{2}$ -inch reamers (for pipe work).

6 flush receptacles.

4 telephone receivers and cords.

S.

10 pounds string solder.

3 dozen Edison $\frac{1}{8}$ inch brass key sockets.

1 dozen Edison $\frac{3}{8}$ -inch brass keyless sockets.

1 dozen Edison $\frac{3}{8}$ -inch brass pull sockets.

$\frac{1}{2}$ dozen Edison key wall sockets.

$\frac{1}{2}$ dozen Edison porcelain key sockets.

6 gross 2-inch No. 10 R. H. B. screws.

2 gross $2\frac{1}{2}$ -inch No. 10 R. H. B. screws.
6 gross 1-inch No. 6 F. H. B. screws.
6 gross $\frac{5}{8}$ -inch No. 6 F. H. B. screws.
6 gross $1\frac{1}{2}$ -inch No. 6 F. H. B. screws.
2 gross 2-inch No. 6 F. H. B. screws.
2 gross $\frac{7}{8}$ -inch No. 10 F. H. B. screws.
1 gross $\frac{5}{16}$ by $\frac{3}{4}$ inch F. H. B. machine screws.
1 gross $\frac{1}{4}$ by $\frac{3}{4}$ inch F. H. B. machine screws.
1 crosscut saw.
1 rip saw.
1 dozen S. P. snap switches.
1 dozen D. P. snap switches.
1 dozen 3-way snap switches.
1 dozen 4-way snap switches.
2 25-amp. 110-v. D. P. J. K. switches.
6 S. P. flush switches.
1 oil stone.
1 combination square.
2 keyhole saws.
10 nail sets.

T.

1 dozen rolls rubber tape.
2 dozen rolls friction tape.
10 alcohol soldering torches.
1 plumber's gasolene torch.
3 dozen assorted molding taplets.
2 wall telephones.
4 telephone transmitters.
20 pounds D. P. tacks.
4 $\frac{1}{4}$ taps and drills for same.
4 $\frac{5}{16}$ taps and drills for same.
10 feet $\frac{1}{4}$ -inch rubber tubing.
10 metal molding T's.
50 3-inch by $\frac{5}{16}$ -inch porcelain tubes.
1 dozen 4-inch by $\frac{5}{16}$ -inch porcelain tubes.
5 dozen 6-inch by $\frac{5}{16}$ -inch porcelain tubes.

V.

1 small vulcan chain vise.
1 pound of vaseline.
2 pipe vises.

W.

1 pound 3-amp. fuse wire.
1 pound 10-amp. fuse wire.
50 feet German silver wire (No. 14).
50 feet soft iron wire (No. 14).
50 feet snake wire.
1 tap wrench.
6 assorted S. wrenches.
6 10-inch Stilson wrenches.

- 2 10-inch monkey wrenches.
- 6 assorted socket wrenches.
- 300 pounds annunciator wire.
- 1,000 feet No. 14 R. C. wire.
- 500 feet No. 14 twin R. C. wire.

GENERAL EQUIPMENT.

- 1 3½ K. W.- 150 D. C. generator (G. E.).
- 1 7½ K. W.- 150 A. C. generator (G. E.).
- 1 5 H. P. gas engine or 5 H. P. motor.
- Necessary belts, pulleys and countershafts to suit location.
- 2 P. D. Evans motor generator sets, complete, one motor A. C. and the other D. C. type.
- 1 2-panel switch board (1 side for A. C. and the other D. C.) with necessary instruments and attachments.
- 1 stock rack.
- 1 pipe bench.
- 400 notebooks.
- Drawing paper.
- Pencils.
- Erasers.
- 1 gallon lard oil.
- 1 gallon medium machine oil.
- 1 gallon wood alcohol.
- 1 gallon gasoline.
- 1 ½ H. P. 110 D. C. shunt wound motor (with starting box).
- 1 ½ H. P. 110 A. C. motor (with starting box).
- 10 pounds cotton waste.
- 1 coat rack.
- 1 book cabinet.

ELECTRICAL CLASS.

RELATED AND ACADEMIC WORK.

This illustrates the planning of lessons over a series of weeks and shows deviations from general courses like those of English, Civics and Hygiene.

DRAWING.	Mathematics.	English.	Civics.	Hygiene.
Two cans on same level showing rounded top and bottom, 2 inches tall and $1\frac{1}{2}$ inches in diameter.	Addition. Subtraction. Multiplication. Division. Simple problems leading to fractions.	Reading, discussion and composition on voltage. Have some compositions discussed by class.	Explanation of difference between a citizen and an alien. Short discussion by boys.	Reasons for not putting things used by others into one's mouth.
Symbol for a dry cell. Symbols showing three dry cells in series—three dry cells in multiple.	Show how to read a volt-ammeter. Addition, etc., of mixed numbers, using problems on electric goods.	Read about positive and negative electricity. Then have compositions written and read.	Explain about franchise that citizens enjoy. Have short discussions on same by boys.	Danger from cuts and how to detect blood poison resulting from cuts.
Drawings of: Electric bell, electric push button and dry cell of battery.	Cost of installing a bell system and firm's profit at 25 per cent above cost.	Read and have compositions on electro-magnets.	Explain about ambassadors and have short discussions on same.	Danger from putting screws and staples in mouth. Explain about cleaning up after work.
Drawing showing side wall of room.	Interpretation of different lines on a two-foot folding rule.	Advantages and disadvantages of a full size drawing. Compositions.	Explain about aliens and have short discussions.	Reasons for wearing overalls and jumpers.
Drawing showing trade symbols for two bells wired in multiple.	Different lines drawn to scale of $\frac{1}{2}$ inch, $\frac{1}{4}$ inch, 1 inch to foot, answer to come in feet and inches.	Advantages and disadvantages of scale drawings. Compositions.	Explain about native and naturalized citizen of either sex. Discussions.	Disadvantage of working in damp places and how to guard one's health.
Drawing showing side wall of room on scale of $\frac{1}{4}$ inch to the foot.	Make out bill covering last job finished in shop.	Make out a report on last job done in shop, including time of start and finish.	Protection to citizens when traveling in other countries. Discussions.	Reasons for perspiration and why a person doing work causing same should take frequent baths.

Insert two bells in last drawing so that one bell will be 7 feet 3 inches from floor, one 8 feet 8 inches. Bells to be 3 feet from right side of drawing.	Figuring out firm's profit if they charged customer 20 per cent more on labor than they paid you and 60 per cent profit on cost of stock.	Advantages and disadvantages of contracts. Compositions.	Forfeiture of the rights of citizenship. Discussions.	Disadvantages to health caused by spitting carelessly.
Insert two buttons wired in multiple to ring bottom bell. First button, 3 feet 3 inches high, second button, 5 feet 9 inches high. Scale $\frac{1}{4}$ inch to 1 foot. Same distance from side as bell.	Draw lines from specifications on the scale of $\frac{1}{4}$ inch to 1 foot so that answer will be in feet and inches.	Disadvantages of loose splices and connections. Read in insurance books on splices. Composition.	How to become a citizen if one is born abroad. Discussion.	Unsanitary toilets and danger from same.
Insert two buttons wired in series to ring top bell. First button, 2 feet 6 inches high, second button, 4 feet 9 inches high. Scale $\frac{1}{4}$ inch to 1 foot. 6 feet from right side of drawing.	Estimate amount of material needed to install ten sets of bells and buttons similar to those installed in series on your drawing.	Advantages and disadvantages of day work. Compositions.	What is a town? What is a city? Discussions.	Danger from working where gas is escaping.
Making drawing of another wall on scale of $\frac{1}{4}$ inch to 1 foot.	Estimate probable cost of previous stock estimated and also cost for putting up, if it took two hours to put up one set.	Danger from uninsulated wires. Short circuits, grounds, deaths, and fires. Compositions.	Incorporation of a town or city. Discussions.	Cold lunch on jobs. Type of food for one's best welfare.
Insert a button and bell 2 feet 4 inches from right side of previous drawing; also insert button and bell 1 foot 8 inches from left side. Button to be 3 feet high and bells 8 feet 8 inches. Wire up same so that left button will work right bell and <i>vice versa</i> .	A foreman, six journeymen and one helper on a job that runs for 5 days of 8 hours each. Foreman gets \$1.10 per hour. Journeymen get \$1 per hour. Helper, \$0.67 $\frac{1}{2}$ per hour. If you are going to pay them off how much money must you have?	Advantages of wholesale houses. Compositions.	Different types of town and city government.	Mechanic's handkerchief and how he should use it.

DRAWING.	Mathematics.	English.	Civics.	Hygiene.
Drawing of an annunciator.	<p>How much money must be paid for installing a six-drop annunciator where the following material was used:</p> <p>1 6-drop annunciator at \$6. 660 feet annunciator wire at 39 cents per pound (165 feet to the pound). 4 dry cells at 37 cents each. 6 metal push buttons at 22 cents each. 2 rolls friction tape at 22 cents per roll. 16 hours' labor for journeyman at \$2 per hour. 16 hours' labor for helper at \$1 per hour. Carfares, 20 cents.</p>	<p>What do you consider a fair percentage of profit for a firm to make on work and why?</p> <p>Compositions.</p>	<p>Why is it necessary to have town, city, state and federal government? Why not have only one of them? Discussions.</p>	<p>Mechanics' recreation.</p>
Drawing of a sounder on telegraph instrument.	<p>Electricity travels 186,000 miles per second. What fraction of a second will it take a telegraph message to travel between two relays 2,000 miles apart providing no external resistance is considered?</p>	<p>History of the telegraph.</p> <p>Compositions.</p>	<p>Who enforces the laws? Discussion. (Include electrical inspection department.)</p>	<p>Types of clothing necessary at different times of year.</p>
Drawing of telegraph relay.	<p>A telegraph relay takes .001 of an ampere to make it work. A sounder requires .125 of an ampere. If you use two batteries with each instrument (30 ampers each) which will run out first and how long will it take for both sets to run out?</p>	<p>History of marine cables. Their advantages and disadvantages in the World War. Compare with wireless.</p> <p>Compositions.</p>	<p>State government, how composed. Discussions.</p>	<p>Proper types of drinks for mechanics.</p>
Drawing of a telephone receiver.	<p>If a 100-ohm telephone receiver has 850 feet of No. 32 wire on its coils, how much wire must you take off it to reduce its resistance to 40-ohm?</p>	<p>Advantages of police and fire signal system. Compositions.</p>	<p>United States Government, how composed. Discussions.</p>	<p>Tobacco habit.</p>

Drawing of an induction coil as used with telephone. Also a drawing of a telephone receiver.	An induction coil has 1,190 feet of No. 26 magnet wire for its secondary winding. The ratio between the length of secondary and primary windings is $3\frac{3}{4}$:1. How much primary wire must you put on the coil?	Why do electricians have to do their work according to rules made by the insurance companies? Compositions.	Democracy discussions.	Mechanics' home conditions.
Drawing of a complete telephone.	A firm bought 17 telephones at \$3.53 each, less two tens and five off. What did the phones cost the firm?	History of the telephone. Compositions.	Advantages of democracy over other forms of government.	First aid for mechanics.

MACHINE SHOP CLASS.

The sequence of the shop lessons is not rigidly fixed. The individual pupil may progress as rapidly as his ability permits, and within reasonable limitations after the preliminary exercises have been mastered, may take up the course at any point.

The entire course is laid out on blueprint operation sheets and drawings which show directions, specifications and related mathematics in detail.

The first six lessons cover preliminary exercises.

The exercises are:

Cutting stock to length on power hack saw.

Fundamentals on the engine lathe, including trueing in four-jawed independent chuck, facing ends, centering either with small chuck in tail stock spindle or by use of dividers, center square, or hermaphrodite calipers.

Drilling on sensitive spindle drill press, using either combination center drill or small drill and countersink.

Lathe work on facing ends to accurate length on centers, straight turning, turning to four different diameters, scale lengths with square shoulders.

The next step with the same piece of stock makes either a screw driver handle or a gear and shaft for the household grinder.

LIST OF BLUEPRINTS.

(Each of these is a lesson laid out as a working drawing.)

- Drawing No. 1-C. Lesson No. 2.—Centering.
- Drawing No. 1-S. Lesson No. 3.—Straight turning.
- Drawing No. 2-S. Lesson No. 4.—Straight turning to different diameters and lengths.
- Drawing No. 4-S. Lessons Nos. 5, 6, 7.—Screw driver handle.
- Drawings Nos. 1-L and 1-T. Lessons Nos. 8, 9, 10.—Lathe centers.
- Drawing No. 6-S. Lesson No. 11.—Screw cutting.
- Drawing No. 7-S. Lesson No. 12.—Machine bolts.
- Drawing No. 8-S. Lesson No. 13.—Step blocks.
- Drawing No. 9-S. Lesson No. 14.—Clamps.
- Drawing No. 2-T. Lesson No. 15.—Taper gauges.
- Drawing No. 3-T. Lesson No. 15.—Taper gauges.
- Drawing No. 10-S. Lesson No. 16.—Thread gauges.
- Drawing No. 5-S. Small size screw driver.
- Drawing No. 3-S. Scratch awl.
- Drawing No. 11-S. Surface gauge.
- Drawing No. 2-C. Center punch.
- Drawing No. 3-C. Calipers.
- Drawing No. 4-C. Chisel.

- Drawing No. 5-C. Toolmakers' clamps.
Drawing No. 1-A. Adjustable parallel.
Drawing No. 1-T. Taper turning.
Drawing No. 4-T. Thread stop.
Drawing No. 1-P. Parallel clamps.
Drawing No. 2-P. Plug gauges.
Drawing No. 1-P. Depth gauge.
Drawing No. 1-V. V blocks.
Drawings Nos. 1 to 12 G. Household grinder.
Drawings Nos. 1 to 20. Gas engine parts.
Drawings Nos. 12 to 32 G. Column grinder and countershaft.

MACHINE SHOP CLASS.

SHOP WORK AND RELATED MATHEMATICS AND DRAWING.

SHOP WORK.	One or More of These Products.	Lesson.	Related Mathematics.	Drawing.
LESSON 1. (2 weeks.) Care of tool room. Giving out tools.		1		
LESSON 2. (2 weeks.) Drawing No. 1-C. Different ways of centering. Cutting off stock. Facing end in chuck. Use of side tool chuck and independent lathe chuck.	To be used for products mentioned later.	2 3 4	Reading of rule: Ability to recognize $\frac{1}{8}$ inch, $\frac{1}{4}$ inch, $\frac{3}{8}$ inch, $1\frac{1}{8}$ inches, etc. Making lines of given lengths, as $1\frac{1}{8}$ inches, $\frac{3}{8}$ inch, $1\frac{1}{4}$ inches, etc. Measuring given lines on blueprints to scale, as $\frac{1}{4}$ inch = 1 foot, etc. Common fractions: Addition, multiplication, subtraction and division.	LESSON 1. (1 week.) Use of drawing board, T square and triangle, Plates Nos. A1, A2.
LESSON 3. (3 weeks.) Drawing No. 1-S. Straight turning and facing ends to length on centers.	Exercise.	5 6	Review of Lessons 1, 2, 3 and 4. Mixed numbers: Changing to improper fractions and conversely.	LESSON 2. (2 weeks.) Laying out of paper on board, Plate No. B3. Lettering Plate No. B1.
LESSON 4. (2 weeks.) Drawing No. 2-S. Straight turning to 4 different diameters and 3 scale lengths.	Exercise.	7 8	Four operations: Using mixed numbers that contain fractions whose denominators are 2-4-8-16-32-64. Decimals: Change from fraction and conversely addition, subtraction, multiplication and division.	
LESSON 5. (3 weeks.) Drawing No. 4-S. Straight turning, knurling, form turning and taper turning micrometer size.	Screw driver handle.	9 10 11	Decimals: Reading and writing to four places. Placing of point; moving of point to multiply or divide by 10 or 100. Review of Lessons 6, 7, 8, 9. Applied decimals. Ability to read instrument graduated to $\frac{1}{1000}$ of an inch, using model of micrometer to demonstrate.	LESSON 3. (4 weeks.) Geometrical construction. Plates Nos. E1, 2, 3, 4.
LESSON 6. (3 weeks.) Drawing No. 4-S. Chuck work. Use of four-jawed independent chuck. Drilling, boring, reaming, turning and forming. Finishing complete.	Screw driver handle. Wooden plugs for end of screw driver handle.	12 13	Formulas: Simple and their uses with regards to rectangle, rectangular solid, square, cylinder, etc. Review of Lessons 11, 12.	LESSON 4. (1 week.) Drawing No. 4-S. Screw driver handles.

LESSON 7. (3 weeks.) Drawing No. 4-S. Forging, hardening and tempering.	Lathe centers, etc. Screw driver pit, center punches, etc.	14	Taper turning: Ability to figure amount to set over tail stock and find taper by measuring sample.	LESSON 5. Drawing No. 1-L. Lathe center.
LESSON 8. (2 weeks.) Drawings No. 1-T. Taper turning.	Exercise.	15	Speeds and feeds: Ability to figure correct speed to run machine. Estimate time on job from blue-prints.	LESSON 6. Drawing Plate No. B-1. Lettering.
LESSON 9. (4 weeks.) Drawing No. 1-L. Grinding straight and taper cylindrical. Use of grinding attachment or portable grinder for grinding 60 degrees angle on lathe centers.	Lathe centers.			LESSON 7. Drawing Plate No. F-2. Projection.
LESSON 10. (6 weeks.) Drawing No. 1-L. Taper turning. Use of compound rest.				LESSON 8. Drawing Plate No. 3. Projection.
LESSON 11. (4 weeks.) Drawing No. 6-S. Screw cutting.	Exercise.	16	Ability to figure gears to cut different threads on lathe. Lesson sheet 10-S.	LESSON 9. Drawing Plate No. 1-4. Working drawing.
LESSON 12. (6 weeks.) Drawing No. 7-S. Straight turning and facing to micrometer sizes. Screw cutting.	Pinion and shaft for grinder machine bolts, etc.	17	Formulas and rules to find root diameter of taps correct size to bore hole to get standard thread, etc.; how to find threads per inch, pitch, lead, etc.	LESSON 10. Working drawing. Drawing Plate No. R-1.
LESSONS 13-14. (6 weeks.) Drawing No. 8-S. Plain simple jobs held in vise or special fixture.		18	Review of previous lessons.	LESSON 11. Drawing of machine bolts, pinion and shaft (whatever is to be made in shop).

This is the point reached in shop work by the average pupil. There are, however, so many exceptional pupils that frequent use is made of the remainder of the course. Each pupil progresses according to his own ability. A bright boy who is in the school two years covers practically the entire course.

Advanced Work.

SHOP WORK.	One or More of These Products.	Lesson.	Related Mathematics.	Drawing.
LESSON 15. (8 weeks.) Drawing No. 2-T. Taper turning and boring. Use of taper attachment, offsetting tail stock and compound rest.	Gauges, etc.	19	Review of Lesson 14.	LESSON 12. Plug and ring gauges. Drawing No. 2-T.
LESSON 16. (10 weeks.) Drawing No. 10-S. Chuck work internal. Threading. Making standard thread gauges.	Thread gauges.	20	Ratio and speed of pulley and gears.	LESSON 13. Drawing No. 9-T. Thread gauge.
LESSON 17. (4 weeks.) Drawing No. 2-A. Long, slender work supported by center rest. Use of center rest in boring, tapping, centering, etc.	Small lead screw. Milling machine, arbors, etc.	21	Ability to figure horse power transmitted by belts or size of belt required to run certain machines.	LESSON 14. Drawing No. 2-A. Milling machine. Arbor with collars.
LESSON 18. (4 weeks.) Drawing No. 10-G. Work held on face plate or work that cannot be held in chuck, irregular surface.	Household grinder. Gas engine parts.	22	Ability to estimate time and cost of labor, material, etc., from blueprint. Making out bills for different jobs completed in machine shop.	LESSON 15. Drawing No. 10-G. Casings. Details for household grinder.
LESSON 19. (10 weeks.) Drawings from Nos. 1 to 14 G, and Nos. 1 to 20 GE. Drill press. Work held in vise, platen, jig, fixture and special setups. Drilling, reaming, counterboring, tapping, etc.	Parts for household grinder and gas engine.	23 24	Speeds and feeds for drilling. Problem on indexing ratio, etc.	LESSON 16. Drawings Nos. 1 to 14 GE, and Nos. 1 to 20 GE. Parts of gas engine and grinder.
LESSON 20. (20 weeks.) Milling machine. Gear cutting. Spiral milling, etc.	Gears for grinders. Making spiral cutter.	25	Formulas for gears; figuring depth of tooth, outside diameter, pitch, pitch diameter, etc.	

ACADEMIC SUBJECTS.

This is in addition to, or as a substitute for, the topics given in the general courses in English, civics and hygiene. It shows the method of planning lessons week by week, with natural deviations from the general courses, especially in civics and hygiene.

In machine shop academic work related mathematics and drawing properly require about 60 per cent of the time. The rest of the time is devoted to English work, oral and written, based on topics in civics and hygiene, common errors and simple correspondence.

WEEK.	English.	Civics.	Hygiene.
1.	Spelling from selected list.	Government and laws. 1. Meaning. 2. Necessity. 3. Kinds. 4. Duties of citizens regarding laws.	Personal health. a. Value. b. Preparation for day's work.
2.	Based on Hygiene.	Government of self. Self-control. Development of will power. Value of right living.	Shop don'ts. Ref.: "How to Run a Lathe," p. 61.
3.	Based on Civics.	Foundation of government. 1. Dependent on citizens.	Aids to health. a. Value of fresh air. b. Value of exercise. c. Value of rest.
4.	Oral and written composition. Value of Machinery in Industry.	Citizenship. a. Native born. b. Alien. c. Naturalization.	The eye. a. Value of eyesight. b. Care of eyes. c. Treatment of defects.
5.	Based on Civics.	Columbus Day.	The ear. a. Value. b. Care. c. Effects of noise.
6.	Based on Shop Science. Materials: Metals: Iron and steel.	Citizens. a. Rights. b. Duties.	The nose. a. Use. b. Care. c. Nose bleed. d. Tonsils. e. Adenoids.
7.	Based on Shop Science. Materials: Metals: Brass, cast iron.	The family. 1. Authority and duties of parents. 2. Debt of children to parents.	Rules of health. Ref.: "Course in Hygiene."
8.	Based on Hygiene.	Duties of parents to children.	The teeth. a. Number. b. Construction. c. Care. d. Treatment.

WEEK.	English.	Civics.	Hygiene.
9.....	Oral and written exercise. Business letter: a. Heading. b. Salutation. c. Body. d. Conclusion. Based on Shop Science.	Rights of parents or duties of children. 1. Obedience. 2. Helpfulness. 3. Support. Election day. Machinery of election. The school: Its relation to the home.	The skin and hair. a. Use. b. Care. c. Some diseases of each. Hands and feet. a. Care. b. Tight shoes. The blood. a. Composition. b. The heart. c. Veins and arteries. d. Blood poisoning.
10.....	Based on Shop Science.		
11.....	Based on Civics.		
12.....	Correct speech. Common errors. Use of auxiliary with "seen" and "done." Use of "ain't" and "he don't."	Government of schools. School Committee. Superintendent. Master. Teacher. Duties of teacher and pupil.	Recreation and amusements. a. Kinds. b. Need of. c. Value of.
13.....	Based on Hygiene.	Community welfare. Social service. Duties towards neighbors.	Ventilation. a. Need. b. In house. c. In shop.
14.....	Based on Civics.	Development of Port of Boston. a. Necessity. b. Advantages.	Digestion. a. Foods easy to digest. b. Foods difficult to digest. c. Advice on eating.
15.....	Spelling from selected list.	Christmas Day.	Sleep. a. Necessity. b. Conditions for good sleep.
16.....	Based on Shop Science. Materials: Baking.	Relations between employer and employee. Rights and duties of each.	Temperance and its value.
17.....	Based on Shop Science. Materials: Baking (<i>continued</i>).	Relations of employee to his fellow-workers. a. Harmony. b. Cooperation. c. Fair play.	Drug habit and patent medicines.

18.	Correct speech. Use of may and can.	Citizenship. a. Meaning of "citizen." b. Aliens c. Naturalization. 1. Meaning. 2. Conditions.	Tobacco and cigarettes.
19.	Based on Civics.	Advantages of citizenship. Rights and their enjoyment.	Clothing and its purpose.
20.	Based on Shop Science. Tools.	Duties of citizens. a. Obedience to law. b. Defense of country. c. Industry. d. Interest in public affairs.	First aid.
21.	Based on Civics.	Lincoln's and Washington's birthdays.	The sanitary home.
22.	Based on Hygiene.	Fire department. 1. Fire prevention. 2. How citizens can aid.	Hygienic relation of boy to employer. 1. Obligations. 2. Duties.
23.	Correct speech. Use of "there," "their," and "they're."	Police department. 1. Coöperation of citizens with police. 2. Duties of police department towards citizens.	Hygienic duty of employer to boy. Healthy working conditions.
24.	Based on Shop Science. Tools.	Street cleaning department. 1. Coöperation of citizens with.	Water and water supply.
25.	Based on Civics.	Health department. 1. Obedience to sanitary laws. 2. Importance of department. 3. Coöperation of citizens with.	Milk — its use and care.
26.	Use of quotations. 1. Simple. 2. Broken.	Public safety. 1. Precautions against public dangers. 2. Duties of property owners. 3. "Safety First."	Health boards; their work.
27.	Based on Hygiene.	Building commissioners. Duties regarding public property.	Diseases 1. Cause. 2. Prevention.
28.	Based on Shop Science. Tools.	Public park department. 1. Benefits derived therefrom. 2. Coöperation of citizens.	Tuberculosis. 1. Cause. 2. Prevention.

WEEK.	English.	Civics.	Hygiene.
29.....	Based on Civics.	Patriot's Day.	Typhoid fever. 1. Cause. 2. Prevention.
30.....	Spelling from selected list.	Public recreation. 1. Social centers. 2. Playgrounds. 3. Gymnasiums. 4. Bath houses.	Malaria. 1. Cause. 2. Prevention.
31.....	Oral and written exercise. Letter of application for position.	Local government in New England. a. Town government. b. Control of state legislature. c. Town meeting.	The house fly and mosquitoes.
32.....	Based on Shop Science. Acids.	Government of Boston. a. Earliest forms. b. City Charter in 1822. c. New Charter in 1909. d. City departments.	Diphtheria and scarlet fever. 1. Cause. 2. Prevention.
33.....	Based on Civics.	Self-government of the people. a. Direct. b. Representative. c. Importance of majority.	Public dangers.
34.....	Oral and written exercise. Friendly letter.	Memorial Day.	Animals and their part in disease.
35.....	Spelling words from selected list.	Three-fold departments of government. a. Legislative. b. Executive. c. Judicial.	Wastes and their disposal. 1. Garbage. 2. Sewage.
36.....	Based on Hygiene.	Government of Massachusetts. a. Early form. b. Present form.	Disinfection. 1. Necessity for. 2. Methods of.
37.....	Based on Civics.	Bunker Hill Day.	Quarantine. 1. Necessity for. 2. Methods of. 3. Cooperation of individual with health board.
38.....	Review of common errors of speech.	Independence Day.	Public health movement.

EQUIPMENT AND FLOOR SPACE FOR CONTINUATION SCHOOL MACHINE SHOP CLASSES OF TWENTY BOYS.

Floor space — 1,500 square feet.

Machine tools as follows:

- 2 14-inch by 6-foot bed lathes with taper attachments and Skinner 4-jawed independent chucks.
- 4 14-inch by 6-foot bed lathes with regular equipment and Skinner 4-jawed independent chucks.
- 4 14-inch by 6-foot bed lathes without lead screw (turning only) and Skinner 4-jawed independent chucks.
- 1 No. 4 Stark bench lathe with all attachments.
- 1 universal milling machine with all attachments.
- 1 16-inch stroke shaper.
- 1 20-inch Barnes drill press with back gears and tapping attachment.
- 1 small sensitive spindle drill press, $\frac{3}{8}$ -inch capacity.
- 1 No. 1 Bath universal tool grinder.
- 1 14-inch Blount wet grinder (tool).

Bench on two sides of room, 30 inches wide, 30 inches high, with 10 bench vises, 6-inch jaw.

Tool crib or room, 20 feet square.

Small tools:

- 12 Armstrong tool holders.
- 10 pounds of $\frac{5}{16}$ -inch square H. S. steel tool bits.
- 3 Armstrong R. H. offset tool holders.
- 3 Armstrong L. H. offset tool holders.
- 2 Armstrong knurling tools.
- 3 Armstrong cutting-off tools.
- 1 Armstrong cutting-off tool, R. H. offset.
- 1 Armstrong cutting-off tool, L. H. offset.
- 2 Armstrong side tools, 6 extra blades.
- 1 Armstrong side tool, R. H. offset.
- 1 Armstrong side tool, L. H. offset.
- 10 pairs 1-inch micrometers. (Slocomb's.)
- 2 pairs 2-inch micrometers. (Slocomb's.)
- 1 pair 3-inch micrometers. (Slocomb's.)
- 1 pair 4-inch micrometers. (Slocomb's.)
- 10 pairs 6-inch outside calipers. (Starrett's.)
- 3 pairs 3-inch outside calipers. (Starrett's.)
- 3 pairs 5-inch inside calipers. (Starrett's.)
- 3 pairs 3-inch inside calipers. (Starrett's.)
- 3 9-inch combination squares.
- 6 pairs dividers. (Starrett's.)
- 1 12-inch combination set.
- 6 assorted hammers.
- 6 assorted screw-drivers.
- 6 pairs assorted pliers.
- 3 dozen assorted files.
- emery cloth, 1 quire each, No. 0-1-2.
- 5 gallons lard oil.

Small tools:

- 5 gallons cutting oil.
- 5 gallons machine oil.
- 5 gallons kerosene.
- 4 Goodell-Pratt drill chucks.
- 2 sets of No. 1 to No. 3 Morse collets.
- 2 No. 3 Armstrong drill holders.
- 1 automatic drift. (Armstrong.)
- 6 oil cans.
- 12 1-inch oil brushes.
- 12 6-inch L. S. Starrett's scales (steel rules).
- 6 3-inch L. S. Starrett's scales (steel rules).
- 1 Skinner drill press vise.
- 1 set of cutters for milling machine — not over 12.
- 6 chisels.
- 6 center punches.
- 2 reamer wrenches to take from $\frac{1}{4}$ -inch reamer to $1\frac{1}{4}$ -inch reamer.
- 1 T-style tap wrench, capacity $\frac{1}{4}$ -inch tap.
- 1 set standard dies from $\frac{5}{8}$ to 1 inch and die stock.
- 2 No. 3 hide-faced hammers.
- 1 set of hand reamers by 16ths of an inch from $\frac{1}{4}$ inch to $1\frac{1}{4}$ inches.
- 1 set of drills by 64ths of an inch from $\frac{1}{8}$ inch to $\frac{5}{8}$ inch.
- 1 set of drills by 16ths of an inch from $\frac{3}{8}$ inch to $1\frac{5}{8}$ inches.
- 1 set of taps by 16ths from $\frac{1}{8}$ inch to $1\frac{1}{4}$ inches.
- 3 center gauges.
- 1 surface gauge.
- 1 belt punch.
- 1 bundle of $\frac{1}{4}$ -inch belt lacings.

MECHANICAL DRAWING CLASS.

Every workman needs some knowledge of drawing, blueprint reading, and sketching. Work on simple working drawings is given in each shop department of the school. For pupils who need or desire more instruction of this kind a special course is given. After a pupil has acquired some proficiency in elementary drawing he may be transferred to a shop class, or he may continue with drawing and receive more advanced work on some special line in which he is interested.

From time to time as a pupil in a shop class has specific need for instruction in drawing, he may be transferred from the shop class to the mechanical drawing class, and, after a suitable period of specialized drawing instruction, be transferred back to the shop class.

CONTENT OF COURSE.

- Lesson A 1-2. Introduction. Use of T square and triangles. Laying out paper.
- Lesson B 1-2-3-4. Lettering; standard lines; plates and sectioning.
- Lesson C 1. Use of instruments.
- Lesson D 1-2-3-4-5. Exercises with use of T square, triangles, and compasses.
- Lesson E 1-2-3-4. Drawing of geometrical problems; as, bisect lines; bisect angle; scribe square with circle, etc.

Lesson F 1-2-3-4-5. Making shop sketches of such articles as cylinder, cube, gear blank, lathe center, etc.

Lesson G 1. Exercise in scale drawing and use of scale.

Lesson H 1-2-3-4. Making plans, front and side views of simple objects; as, miter joints, mortise and tenon joints, lap joints, etc.

Lesson I 1-2-3-4. Making elementary working drawings from sketches of models, gears, cylinders, blocks, etc.

Lesson J 1-2-3-4-5. Making scale drawings of above gears, plates, shafts, pulleys to such scales as $\frac{3}{4}$ inch to foot, $\frac{1}{2}$ inch to foot, etc.

Lesson K 1-2-3-4-5. Working out detailed and assembly drawings of objects, models, etc.

Lesson L 1-2-3-4. Tracing, blueprint making and operation sheets.

Lesson M 1-2-3-4. Elementary sheet metal patterns and lay-outs; as, cylinder, cone, etc.

Lesson N 1-2-3-4. Electrical drawings and reading on wiring, measuring and lay-outs.

Lesson O 1-2-3-4. Extra sheets for students who are quick and accurate.

Each lesson is numbered so as to have the student progress uniformly, and also is in detail so that the student can, with little aid, work with speed and accuracy.

ELECTRICAL.	Sheet Metal.	Woodwork.	Machine.
A 1.....	A 1.....	A 1.....	A 1.
B 1-2-4.....	B 1-2-4.....	B 1-2-3.....	B 1-2-3-4.
C 1.....	C 1.....	C 1.....	C 1.
D 1-2-4.....	D 1-2-4.....	D 1-2-3.....	D 1-2-3-4.
E 1-2-3-4.....	E 1-2-3-4.....	D 1-2-3-4.....	E 1-2-3-4.
F 1-2.....	F 1-2.....	F 1-2.....	F 1-2-3-4.
G 1.....	G 1.....	G 1.....	G 1.
H 2.....	H 2.....	H 1-2-3-4-5.....	H 1.
I 1-2.....	I 2.....	I 1-2.....	I 1-2-3-4.
J 1-2.....	J 1-2.....	J 1-2-3.....	J 1-2-3.
K 1-2.....	K 1-2.....	K 1-2.....	K 1-2.
L 1-2.....	L 1-2.....	L 1-2.....	L 1-2-3.
M 1.....	M 1-2-3-4.		
N 1-2-3-4.			

RECORD AND PROGRESSION CARD FOR INDIVIDUAL PUPILS.

(4 x 5 $\frac{1}{8}$ white card.)

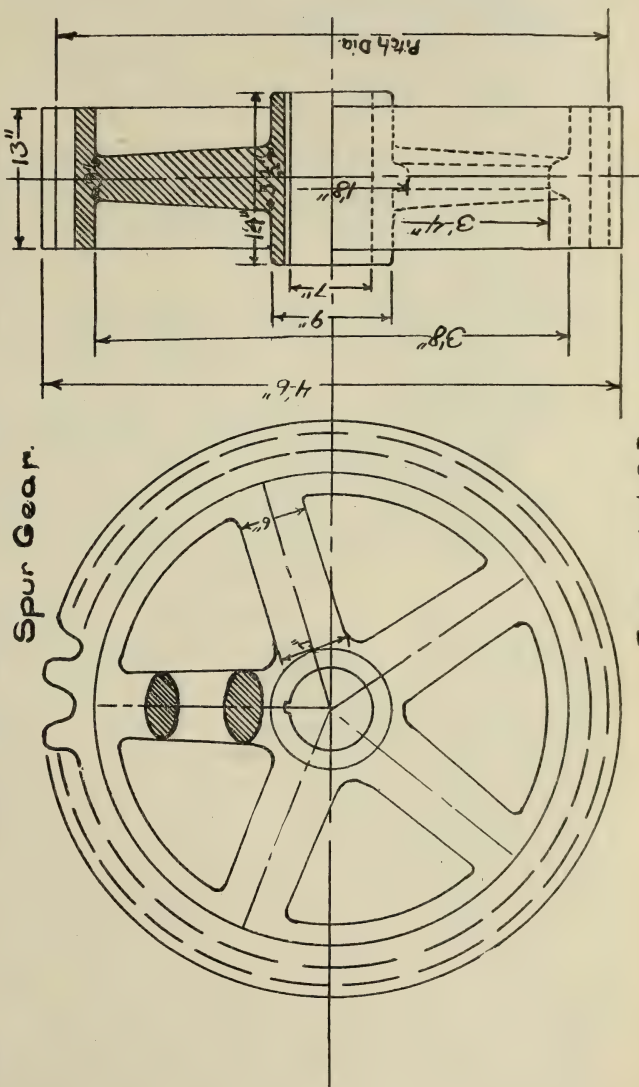
Name	No.						Destiny						
							Day			Hour			
	1	2	3	4	5	6		1	2	3	4	5	6
A.....	1	2	3	4	5	6	J.....	1	2	3	4	5	6
B.....	1	2	3	4	5	6	K.....	1	2	3	4	5	6
C.....	1	2	3	4	5	6	L.....	1	2	3	4	5	6
D.....	1	2	3	4	5	6	M.....	1	2	3	4	5	6
E.....	1	2	3	4	5	6	N.....	1	2	3	4	5	6
F.....	1	2	3	4	5	6	O.....	1	2	3	4	5	6
G.....	1	2	3	4	5	6	P.....	1	2	3	4	5	6
H.....	1	2	3	4	5	6	Q.....	1	2	3	4	5	6
I.....	1	2	3	4	5	6	Remarks:						

Scale Drawing.

Make two views of gear shown below. Use scale.

$\frac{1}{2} \times \frac{1}{2}$ Put in dimensions and cross hatch where needed.

Spur Gear.



Two wanted C.I.

SHOP LAY-OUT FOR MECHANICAL DRAWING CLASS.

(Based on Maximum Classes of 20 Pupils.)

Room 35 feet by 40 feet. (1,400 square feet.)

225 Drawing boards, 23 inches by 17 inches.

10 drawing tables, 6 feet 9 inches by 2 feet 2 inches. (2 boys to a table.)

25 draughtsman's tools.

25 complete sets of instruments.

25 T squares, 24 inches long.

25 60-degree triangles.

25 45-degree triangles.

25 protractors.

1 drawing table with drawer cabinet (for instructor).

1 cabinet 35 inches by 12 inches by 13½ inches partitioned off for 25 trays.

25 metal trays 13 inches by 6½ inches by 1½ inches to hold triangles, scales, instrument case, pencils, art gum, etc.

1 table to hold cabinet.

25 triangular scales.

10 racks (each to hold 20 drawing boards).

1 blueprint machine (also washing attachment).

1 cutting table.

6 hand shears.

1 cabinet with shelves and drawers to hold drawing and tracing paper, tracing cloth, blueprint paper, thumb tacks, art gum, sandpaper blocks, pencils, erasers, etc.

4 pencil sharpeners.

India ink, blackboards, blackboard compass, triangles, T-square.

PRINTING CLASS.

SHOP COURSE.

Instruction Sheets.—The essential instruction on the principles and operations of this course is contained in a series of fifty-four instruction sheets, specimens of which appear herewith. A certain amount of oral instruction will, of course, always be necessary. The course is designed to be adapted to productive work and for this reason it is so arranged that after the first ten lessons it will not be necessary to proceed in definite sequence. It will therefore be possible to use whatever productive work may be available.

The topics covered constitute a maximum course but are so arranged that no matter where the student drops out, he will possess certain definite attainments in the trade. Figuring, estimating, etc., except in their direct application to specific jobs, are taught as related work in the class room.

Illustration.—To illustrate by the common method of drawing on the blackboard in classes where it is possible that no two boys will reach a given point at the same time, is advisable only in unusual cases. Drawing illustrations for each individual boy would take all the time of the instructor. To overcome this, a series of eighteen large, cloth mounted drawings, illustrating common problems is provided. These charts are hung together and are always available for ready reference. In so far as possible, the charts are self-explanatory and require very little oral discussion between the instructor and the student. A specimen chart is submitted herewith.

Records.—Probably in no other type of school is a system for keeping a definite record of each student's progress so necessary as in the Continuation School. The large enrollment, the brief two-hour period and the long interval between periods make it impossible for the instructor to carry in his head the operations or projects that each individual has performed. The accompanying record form is working out very satisfactorily in the Continuation School printing class. The date of completion of each principle is stamped in the proper blank. Owing to the lack of space in the blank, the headings are purposely abbreviated. A comprehensive heading for each number will be found in the accompanying outline.

Instruction Sheets Cover The Following Topics.

1. Introduction.
 - Brief explanation of the work.
 - Care of equipment.
2. Cases.
 - California job case.
 - News cases.
 - Triple and quadruple cases.
3. Lay of the case (California job).
 - Learning the lower case sections.
 - Learning the capital sections.
 - Spelling out from the case a sentence which contains every letter of the alphabet.
 - Spelling out from the case words containing logotypes.
4. b, d, p, q, spaces and quads.
 - Studying b, d, p, q, by means of a chart.
 - Studying relative sizes of spaces and quads from a chart.
5. Application of the point system.
 - Type dimensions.
 - The point system.
 - The pica and nonpareil.
6. Elementary composition (straight matter).
 - Leads and slugs.
 - Tying up.
 - Pulling proof.
 - Distribution.
7. Composition (straight matter).
 - Spaces in combination.
 - Distribution.
8. Composition (straight matter).
 - Rules for breaking words.
 - Estimating in ems.
 - Small caps.
 - Distribution.
9. Pressfeeding.
 - Starting the power.
 - Handling stock on feed board.
 - Feeding.
 - Throw-off.
 - Care of sheets delivered from the press.

10. Care of press.
 - Oiling.
 - Inking.
 - Feeding.
11. Setting gauges and feeding.
12. Hooking up various types of presses. Washing up presses.
13. Elementary display (with straight matter).
14. Commercial headings.
 - Lining up type and rules.
 - Letter spacing.
15. Advertising display.
16. Criticising and revising display matter previously set up.
17. Presswork (general). Locking up job forms.
18. Presswork.
 - Simple make ready.
 - Overlay.
 - Underlay.
19. Use of frisket.
20. Press perforating.
21. Scoring and cutting.
22. Setting up two-color form where colors do not overlap.
 - Skeletonizing.
23. Printing two-color form where colors do not overlap.
24. Simple lay out.
 - Cards, tickets, etc.
25. Lay out and set up simple title page.
26. Point line.
 - 12 point with 10 point, etc.
27. Imposing.
 - 4-page form.
 - Locking up.
28. Simple embossing.
29. Tabular work.
 - Simple leader work.
 - Casting off.
 - Setting up.
30. Columns of figures.
 - Casting off.
 - Setting up.
31. Matter classified by indentation of sub-heads.
 - Casting off.
 - Setting up.
32. Odd sizes (set) in vertical columns.
 - Casting off.
 - Setting up.
33. Rule and figure work.
 - Casting off.
 - Setting up.
34. Presswork.
 - Printing two-color form with frisket.

35. Stock cutting.
Estimating quantity of paper necessary for a job.
36. Cutting card stock on paper cutter.
Allowing trim of rough edge.
37. Lay out and set up title page or cover with border and ornaments.
38. Proofreading.
Application of proof marks.
39. Lay-out.
Title page with diamonds and half diamonds.
40. Layout.
Title page with panels and squares.
41. Pedigree and syllabus work.
Casting off.
Setting up.
42. Imposing "work and turn."
43. Printing and registering "work and turn."
44. Mixing inks.
Tints and shades.
45. Color harmony.
46. Presswork adjusting platen.
Impression screws.
Wedge throw-off.
Eccentric throw-off.
47. Elementary half-tone work.
48. Kinds, sizes and weights of paper.
Comparative substances.
49. Presswork.
Use of fountain.
50. Composition.
Initials and cut-in notes.
51. Running around cuts.
52. Elements of three-color work.
Process inks, etc.
53. Lettering up jobs from manuscript copy on own initiative.
54. General lay-out work.

Charts.

Large, mounted drawings available for ready reference illustrating the following:

1. Parts of type.
2. b, d, p, q.
3. Relative sizes of spaces and quads.
4. Spaces in combinations.
5. Setting gauges on platen press.
6. Lining up type and rules.
7. Letter spacing.
8. Locking up forms (diagrams).
9. Effects of overlaying.
10. Stock cutting diagrams.
11. Application of proof marks.

- 12. Work and turn diagram.
- 13. Diagrams of imposition.
- 14. Color chart for mixing inks.
- 15. Principle of wedge throw-off, eccentric throw-off.
- 16. Table of comparative substance, weights and sizes of paper.
- 17. Diagram showing method of setting initials and cut in notes.
- 18. Diagrams showing method of running around cuts.

RECORD AND PROGRESSION CARD FOR INDIVIDUAL PUPILS.

(3 7/8 x 5 7/8 blue card.)

PRINTING COURSE — SHOP RECORD.

Will be sixteen.....		Enrolled in School.....		Transferred from.....	
Entered Shop Class.....		Permanently Discharged		Transferred to	
Nature of Employment		Prospects in present Employment		Foreman	

Assignment	Previous Training	Record in Class
	Follow-up Record	
		Miscellaneous

Reverse Side of Progression Card.

Name.....		No.	Group.....		
			Day	Hour	
Introduction	Cases	Lay of the case	b. d. p. q. spaces	Point system	Elem. Comp.
1.....	2.....	3.....	4.....	5.....	6.....
Composition	Composition	Pressfeeding	Oiling, Inking Feeding	Gauges & Feeding	Hooking up Washing
7.....	8.....	9.....	10.....	11.....	12.....
Elem. Display	Commercial Heading	Advertising Display	Criticising & Revising	Presswork Gen'l	Make ready
13.....	14.....	15.....	16.....	17.....	18.....
Using Frisket	Press Perforating	Scoring & cutting	2 Color Comp.	2 Color Presswork	Lay-out Cards
19.....	20.....	21.....	22.....	23.....	24.....
Title Page	Point line	Imposing	Simple Embossing	Simple Leader Work	Columns figures
25.....	26.....	27.....	28.....	29.....	30.....
Ind-Subheads	Columns odd set	Rule and figure	2 color with Frisket	Cutting paper	Cutting card stock
31.....	32.....	33.....	34.....	35.....	36.....
Title page border	App. Proofmarks	T. P. panels & Sq.	T. P. diamond & half	Pedigree & Syllabus	Imp. work & turn
37.....	38.....	39.....	40.....	41.....	42.....
Presswork & turn	Tints, shades	Color harmony	Adjusting Platen	Elem. half tone	Paper
43.....	44.....	45.....	46.....	47.....	48.....
Using fountain	Init. & cut-in notes	Run around cuts	Three color	Set man. copy	Gen. layout
49.....	50.....	51.....	52.....	53.....	54.....

PARTS OF TYPE

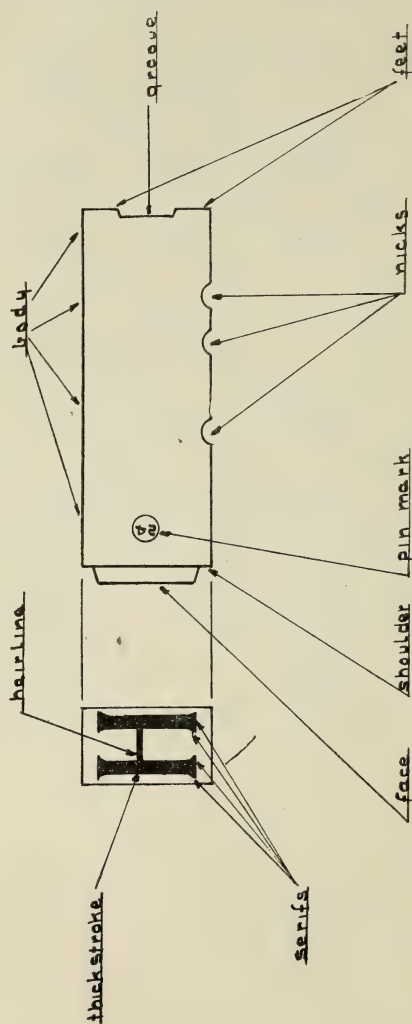
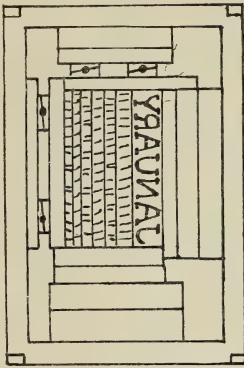


CHART No 1.

LOCKING UP JOB FORMS

When size of Form is in reasonable proportion to size of Chase



Letterhead Form imposed [Head down] in Large Chase

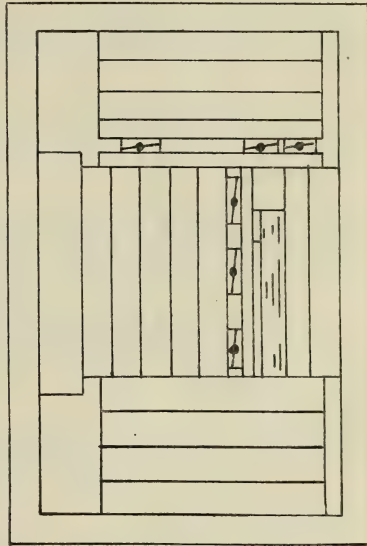


CHART No. 8.

TYPICAL OPERATION SHEET.

Third Lesson.— Learning the Lay of the Case.

Equipment necessary — A California job case and a printed diagram.

1. Put an empty California job case on the rack and get a printed diagram.
2. Study the lay of the lower case sections as follows: From the diagram, memorize the location of a, b, c, d, e. Then turn to the case and locate them in order with the finger. After these are memorized add f, g, h, i, and locate in order a, b, c, d, e, f, g, h, i. Continue in this manner until all the alphabet is learned thoroughly. Then locate all figures, punctuation marks, spaces and logotypes (two letters on one type body).
3. After having learned thoroughly the lay of the lower case sections, take up the capital sections as follows: Learn the letters at the left, reading downward, A, H, P, X. Learn the letters at the right in the same manner, — G, O, W; then those in the center — D, L, S, J. It will be noted that the capitals (excepting J and U) run in the order of the alphabet. If the locations of the three sets of letters are memorized as previously explained the rest will be learned very easily. We know that the C is immediately to the right and the E to the left of the D. B is to the right of A, F to the left of G and so on.
4. Having thoroughly memorized the lay of the case, both capital and lower case letters, read over the following sentence which contains every letter of the alphabet: "The quick brown fox jumps over the lazy dog." Spell out each word, placing the finger on the proper box for each letter, first using all lower case and then all capitals until you are able to go through the entire sentence without hesitating. As the sentence is repeated consider that you are using different spaces between words, first, the 3-em space, then the 4-em, the 5-em, and the en quad in turn.
5. Next, spell out from the cases, the following words, using the logotypes, ff, fi, fl, ffi, ffl, æ, œ, wherever these letters appear in combination. Different; defile; flow; scuffle; sufficient; æolian; œsophagus. Next take the following numbers: 890; 120; 8724; 6291; 167493; 4913072865. In every instance, repeat until each letter or character can be found without hesitation.
6. Be sure you are familiar with the following punctuation marks: Period (.) comma (,) colon (:) semi-colon (;) interrogation point (?) exclamation point (!) apostrophe (') hyphen (-).
7. When you have completed all of the above or if you need further information, report immediately to your instructor.

RELATED MATHEMATICS.

Aim.—To teach pupils to solve certain classes of mathematical problems which arise in the printing industry.

To accomplish this aim it is necessary to devote some time to reviewing and drilling on the four fundamental operations in arithmetic.

Cover the following:

1. Accuracy and speed in the four fundamental operations.
2. Power in simple mental calculations.
3. Common fractions, especially multiples of thirds and halves.
4. Mastery of the decimal point.
5. Acquaintance with business forms — bills, receipts, etc.
6. Elementary percentage.

7. Insurance on property.
8. Interest— simple and compound.
9. Commission.
10. Discount.
11. Profit and loss.
12. Partnership.

(The foregoing are limited to simple problems common in the printing trade.)

The teaching of the above outline is carried over into all trade problems such as:

1. Estimating manuscript matter.*
How many pages will a manuscript containing 10,650 words make if it is set in 10 point type, solid? Pages are to be 22 picas by 36 picas. By setting a line in the stick the matter will average 11 words to a line.
2. Figuring margins.
3. Figuring and cutting stock.*
Cut the stock and figure the price on 5,000 order blanks, $5\frac{1}{4}$ inches by $7\frac{1}{2}$ inches from 20-lb. folio at $12\frac{1}{2}$ cents per pound.
4. Computing weights of paper.
5. Estimating cost of production of jobs, including typesetting, stonework, press work, stock, ink, sketches, electrotypes, half-tones, etc.
6. Taking shop inventories.
7. Making daily time slips.
8. Spacing: Units of space. A compositor had an en and a 4-em space at the end of a line of type. To what shall he change the nine 3-em spaces in the line to justify the line and keep the spacing uniform? *
9. Figuring wages: Increase and decrease.
10. Determining the number of ems in composed matter. A piece of matter set in 8 point is 4 inches wide by 20 inches long. How many ems? *
11. Making the pay roll.
12. Solving problems based on catalogues, price lists and discount sheets.
13. Estimating approximate weight of type in planning jobs.

RELATED ENGLISH.

Oral and written English work furnish a means for emphasizing these points which are especially important in the printing trade.

A.

I. Grammar.

Punctuation. Use of proof marks. Reference marks — asterisk, dagger, double dagger, section, parallel and fist. Roman numerals.

Capitalization.

Sentence structure. Clause. Phrase. Paragraph.

II. Spelling.

(a) Twenty words each week, consisting of ten common words and ten related printing terms.

(b) Rules for spelling:

Syllabication. Compounding.

* Typical problems.

- III. Use of dictionary for reference.
- IV. Reading and study of suitable works, part of which shall be related to printing.

B.

In like manner by means of oral and written English, information on trade processes is provided through work based on the following topics:

- I. Differences in styles and sizes of type.
 - The nicks. Ordinary tools, material and equipment.
- II. The point system.
 - Its application to leads and slugs, rules, type. The line gauge.
- III. Spaces and quads.
 - Their relative sizes based on the em. Methods of distinguishing width and height.
- IV. Distinction between
 - b, d, p, q, n, u, lower case l and figure 1. Diphthongs and logotypes.
- V. Application of the em.
 - Estimating the number of ems in a square of a given size, using 6, 8, 10, 12, 18 and 24 point type.
- VI. California job case.
 - Learn from diagram and print letters in filling in.
- VII. Details of California job case.
- VIII. Details of spacing out and justifying lines.
 - Breaking words. When to take in; when to drive over. Indention.
- IX. Elementary display.
 - Setting up small cards. Diagram made and writing printed.
- X. News cases.
 - Small caps distinguished from like lower case letters c, o, s, v, w, x, z.
- XI. Proper tie up.
 - Straight composition.
- XII. Proving and correcting.
 - Use and interpretation of proof marks.
- XIII. Simple display.
 - Laying out and setting up small cards. Diagram printed and laid out.
- XIV. Triple cases.
 - Simple notices.
- XV. Pressfeeding.
 - Cards, billheads. Cleaning press and rollers.
- XVI. Triple and quadruple cases.
- XVII. Relative value of spaces.
 - Singly and in combination for close justification.
- XVIII. Proper placing of furniture.
 - Diagrams. Locking up.
- XIX. Estimating amount of paper stock for job.
 - Cutting to size.
- XX. Presswork.
 - Make ready.

- XXI. Lining up type and rules.
- XXII. Imposing and locking up.
For form to be printed, "work and turn."
- XXIII. Imposition of four-page form.
Placing gutter sticks.
- XXIV. Colors.
Elementary register work. Harmony.
- XXV. Estimating and cutting paper stock.
With and without cut-off.
- XXVI. Estimating space needed for manuscript copy.

CIVICS AND HYGIENE.

These are taken from the general course.

PRINTING AND BOOKBINDING EQUIPMENT FOR CLASSES OF 20 BOYS.

Floor space — approximately 1,800 square feet.

Equipment.

- 1 14 by 22 press of the Universal type. (Universal, Colt's Armory, National, Hartford or Laureate.)
- 1 12 by 18 Golding art job press.
- 1 8 by 12 Gordon or C. & P. New Series press.
- 1 galley proof press.
- 1 mitring machine.
- 1 lead and rule cutter.
- 1 30-inch cardboard cutter.
- 1 30-inch paper cutter.
- 1 foot-power punching machine.
- 1 wire stitching machine.
- 6 20-case type cabinets (flat top with 2 sets of case brackets on each).
- 4 20-case type cabinets (galley top).
Cases for above to include California job cases, news cases, triple cases, quadruple cases, wood type cases, space and quad cases, border cases, lead cases, brass rule cases and metal furniture cases.
- 2 24 by 36 imposing stones.
- 1 galley rack.
- 1 letter board cabinet.
- 2 two-tier lead racks.
- 1 standard and standard extension furniture case with furniture.
- 1 proofreader's desk.
- 1 closet for paper stock.
- 2 benches (approximately 8 feet by 3 feet).
- 1 15-inch cutter roll for tympan paper.
- 1 18-inch cutter roll for tympan paper.
- 6 pairs of roller brackets.
- 12 6-inch by 2-inch composing sticks.
- 6 10-inch by 2-inch composing sticks.
- 3 12-inch by 2-inch composing sticks.
- 1 18-inch by 2-inch composing stick.
- 6 steel line gauges.
- 12 6-inch by 10-inch galleys.
- 6 10-inch by 16-inch galleys.

- 6 8½-inch by 23¾-inch galleys.
- 12 pairs tweezers.
- 3 dozen Wickersham quoins, No. 1.
- 2 Wickersham quoin keys.
- 3 pressman's knives.
- 3 dozen Hempel quoins.
- 2 Hempel quoin keys.
- 1 8-inch hand roller.
- 1 benzine can (gallon).
- 2 benzine cans (quart sprinkler).
- 1 case of labor saving reglet.
- 100 pounds metal furniture.
- 100 pounds 2-point leads.
- 20 pounds 1-point leads.
- 100 pounds 6-point slugs.
- 30 pounds 12-point slugs.
- Assortment of brass rules, borders and ornaments — styles depending on nature of work available.
- Type.
 - Body type.
 - 50 pounds 6-point old style.
 - 50 pounds 8-point old style.
 - 200 pounds 10-point old style.
 - 50 pounds 12-point old style.
 - 50 pounds 18-point old style.
 - Quads and spaces, braces and dashes, figures, points, capitals, small capitals and lower case.
 - Display type.
 - 1 complete series of boldface.
 - 1 complete series of Gothic.
 - 1 complete series of text.
 - 1 complete series of script.
 - 1 selected series of up-to date card types.
 - A few selected fonts of large display types, including some wood types.
 - 1 font 6-point leaders.
 - 1 font 8-point leaders.
 - 1 font 10-point leaders.
 - 1 font 12-point leaders.
 - 1 font 10-point arithmetic figures.
- Miscellaneous.
 - Assortment of black, white and colored inks. Selected book, bond and cover papers, index card stock and card Bristol.

SHEET METAL CLASS.
SHOP WORK AND RELATED DRAWING AND MATHEMATICS.

NUMBER OF WEEKS.	Shop Projects.	Operations.	Drawing.	Related Mathematics.
1.....	Practice on fluxes.	Handling.		Fundamentals. (See below.)
1.....	Soldering.	Handling and filing coppers.		Fundamentals. (See below.)
1.....	Other methods of uniting metals.	As indicated.	Describe each with a sketch.	Fundamentals. (See below.)
2.....	Cookie cutter.	Cut, double hem, form, solder.	Draw for pattern.	Reading rule. Figure stock to cover wire. Review table of long and square measure. Perimeter of rectangles.
2.....	Doughnut cutter.	Cut, burring machine, form, solder.	Draw for pattern.	Review work on cookie cutter.
3.....	Pint tin cup.	Cut, wire, form, roll, solder.	Draw for pattern.	Review liquid and dry measure. Stock to cover wire. Amount of metal needed. Capacity or volume of cup. Cost of stock.
2.....	Sink drainer.	Cut, wire, punch holes, form, solder.	Draw elevation and plan. Develop pattern, radial line.	Figure cost of stock.
3.....	One quart measure with flaring lip.	Cut, wire, form, solder.	Draw elevation and plan, Approximate pattern.	Review work on pint tin cup. United States standard of weights and measures.
4.....	Ash barrel.	Cut, wire, groove seam, double seam. Bottom, rivet, brake.	Pattern for ribs.	Cutting stock. Review table of cubic measurement. Capacity.
4.....	Water pail.	Cut, wire, form, seam, rivet ears, form bail, solder.	Draw elevation and plan. Draw to scale; develop pattern. Radial line.	Review liquid and dry measure. Scale drawing. Graphs. Capacity.
3.....	Funnel.	Cut, wire, seam, form, solder.	Elevation and plan. Develop pattern. Transfer to metal. Radial line.	Review table of cubic measure, table of liquid measure, volume of cones and pyramids. Capacity of body of funnel. Amount of tin needed. Cost of stock tin, wire, solder, etc.

SHOP WORK AND RELATED DRAWING AND MATHEMATICS. — *Concluded.*

NUMBER OF WEEKS.	Shop Projects.	Operations.	Drawings.	Mathematics.
3.....	Gasoline funnel.	As above, also wire on flat surface, burring machine, turning machine.	As above.	Wiring on flat. Review work on funnel.
4.....	Three piece 90-degree elbow.	Cut, forming rolls, burring machine, turning machine. Setting down seams.	Draw elevation and plan. Develop pattern, transfer to metal. Parallel line.	Spacing of rivets. Review: Finding circumference, diameter, radius, area of circles, volume of cylinders. Circular table.
3.....	T joints.	Cut, forming rolls, seam, solder.	Draw elevation and plan. Intersection between two cylinders of equal diameter. Parallel line.	Capacity of pipes, square, round. Review angular measurements.
3.....	Y joint.	As above.	Draw elevation and plan. Intersection between two cylinders of unequal diameter, at an angle of 45 degrees. Parallel line.	Review of work on T joint.
3.....	Transition piece between two pipes of different diameter.	Cut from pattern, seaming, burring machine, turning machine setting down seams.	Draw elevation and plan. Development of scalene cone cut by a plane parallel with base. Triangulation.	Relation between square and round pipes. Capacity of cylinders. Capacity of pipes.
3.....	Hopper register box, from square pipe to round.	Cut, cornice brake, seam.	Draw elevation and plan. Develop pattern. Triangulation.	Figure on stock. Lay out of work. Method of cutting metal.
8.....	Rotary ash sifter.	Cut stock from pattern, brake work, folding, burring, double and single seaming, boring, wiring, riveting, use of hacksaw.	Draw and work from pattern.	General review. Estimate cost of stock.
4 to 1 year..	Cornice work.	All machines.	Miter pattern cutting. Scale drawing; develop to detail. Parallel development.	Figure cost. Scale drawings. Use of protractor in developing miter lines and in triangulation. Area and perimeter of triangles. Finding hypotenuse. Review square root. Comparison of triangles and rectangles.

SHEET METAL CLASS.

RELATED MATHEMATICS.

Introduction.—Related mathematics for boys' prevocational and trade extension classes in Continuation School work is almost inseparable from instruction on the use and interpretation of working drawings. Arithmetic is not an end in itself in this work. It is simply a useful tool whereby the pupil obtains information necessary to carry on his shop work and the commercial transactions which precede or follow the completion under actual business conditions of such shop work. At the same time review work on the simple fundamentals of abstract arithmetic is necessary in order that the pupil may not forget what he has once learned, and drill work on these same fundamentals is necessary for the pupil who has not learned them thoroughly. Every lesson in arithmetic or mathematics should cover these points.

1. A few minutes of rapid oral or written drill on some phases of fundamental operation.

2. Instruction by means of an individual instruction card or sheet to the individual pupil who needs special help on a given arithmetical problem.

3. For most pupils and for the greater part of the time allotted to arithmetic or mathematics instruction should be based on the working drawing.

The practical problem based on the working drawing is most necessary in the sheet metal class. It is of almost equal importance in the machine shop class, electrical class and woodworking class. In the printing class there are distinct limitations to such use of the working drawing. The following suggestions as to related mathematics in sheet metal work should therefore be considered as fundamental to all shop mathematics and should be applied so far as possible in planning the daily lesson and the lay out for a unit course or longer course.

SHEET METAL MATHEMATICS.

1. Use the course on general arithmetic for suggestions on elementary fundamentals.

2. Addition and subtraction of decimals are best taught from the working drawing. For instance, the drawing shows an over-all dimension within which are several folds and crimps, the dimensions of which are indicated on the drawing. The workman must verify the fact that the sum total of these dimensions equals the given over-all dimensions.

3. Decimal fractions.—The working drawing frequently involves the relation of circumference to diameter. This opens the whole field of work in which the changing of common fractions to decimal fractions and *vice versa* and the use of the fundamental operations in decimals are involved.

4. The use of the two-foot rule and of the square offers work in both common and decimal fractions. The typical problem is: Lay out a two-foot rule on a line. What distance on the line lies between the rule markings of $14\frac{3}{16}$ inches and $17\frac{1}{8}$ inches?

5. The development of working patterns by the methods of parallel line, radial line and triangulation demands and gives facility in figuring areas.

6. The "Sheet Metal Hand Book" furnishes abundant material on figuring dimensions and weights of stock, using tables and studying and using formulæ.

7. Numerous problems are given on trade discounts, pay rolls, time sheets, cost of bills of material, figuring dimensions represented by lines on a scale drawing.

SPELLING LISTS.

This is Typical of Lists used in Many Other Classes.

tinned ware	box	elbows
tin plate	grooved	throat
sheet iron	seams	diameter
galvanized iron	outside grooved	radius
sheet copper	inside grooved	radii
sheet zinc	double seamed	circumference
sheet brass	folded	surface
sheet aluminum	shears or snips	area
lead	straight blade	perimeter
solder	circular	cylinder
machines	combination scroll	burr
squaring shears	circular snips	allowances
forming machine	double cutting	sides
folding machine	hammers	flaps
grooving machine	raising	bending
brake	setting	tucking
wiring machine	riveting	lid
turning machine	chisels	drawing
burring machine	wire	right angle
setting down	lantern	straight angle
beading	operations	acute angle
crimping	folding	obtuse angle
tools	grooving	notches
punches	wiring	collar
solid	riveting	malleable
hollow	soldering	ductile
prick	gauging	fluxes
pliers	burring	intersections
flat nose	single hem	alloys
round nose	folded hem	rosin
combination pliers	double hem	zinc chloride
wire cutters	wired edge	muriatic acid
stakes	scriber	hydrochloric acid
beakhorn	hand groover	frustrum
blowhorn	hickory mallet	cone
hollow mandrel	circumference rule	cookie cutter
candle-mold	wire gauge	funnel
conductor	extension dividers	gasoline funnel
double seaming	compass	three piece elbow
square	cast iron fire pot	hopper register box
hatchet	sheet iron fire pot	cornice
creasing	gas furnace	miter patterns
needle case	crease	rotary ash sifter
joints	handle	water pail
lap	pattern	sink drainer
countersunk	body	T joint
edge-over	corners	construction
cash-box	edges	trimming soldering copper
riveting	dimensions	

TOPICS FOR ORAL AND WRITTEN ENGLISH.

Why I Like Sheet Metal Work.
 How I Spend my Time in the Shop.
 Why I Prefer Shop Work to School Work.
 Relation between School and Shop Work.
 Report on Day's Work in Shop.
 The Various Kinds of Sheet Metal Work.
 The Importance of Sheet Metal Work.
 Sheet Metal Work as a Growing Industry.
 Soldering for Repair Work.
 Wiring and Seaming.
 Closing a Seam.
 Double Seaming by Hand and by Machine
 Operating the Wiring Machine.
 Operating the Turning Machine.
 The Care and Use of the Hand Shears.
 Working with a Cornice Brake.
 Cutting Three-piece Elbow.
 Burring Edge on Bottom of Pail.
 Bending Pipes.
 The Common Metals.
 Extensive Use of Sheet Iron and Steel.
 Sources, Production, Reduction and Uses of Tin, Iron, Zinc, Lead and Solder.
 Properties of Metals.
 Care in Handling Muriatic Acid.
 Making a Cookie Cutter.
 Making a Biscuit Cutter.
 Making a Funnel.
 Making a Drinking Cup.
 Making a Pint Measure.

SHEET METAL SHOP EQUIPMENT FOR CLASSES OF 20 BOYS.

Floor Space, 1,500 Square Feet.

Benches on two sides, 30 inches high, 30 inches wide.
 10 benches, 30 inches high, 24 inches wide, 4 feet long, each with bench plate.
 1 squaring shears, 30 inches.
 1 ring and circular shears.
 1 bar folding machine, 30 inches.
 1 giant groover.
 1 turning machine, with standard.
 1 wiring machine, with standard.
 1 burring machine, with standard.
 1 setting down machine, with standard.
 1 elbow edging machine, with standard. (Extra faces, Nos. 3 and 4.)
 1 beading machine, with standard.
 1 beading and crimping machine, with standard.
 1 double seaming machine.
 1 bench punch.
 2 mandrel stakes, solid.
 6 mandrel stakes, hollow.

- 4 beak horn stakes.
- 4 blow horn stakes.
- 6 double seaming stakes.
- 3 needlecase stakes.
- 4 conductor stakes.
- 4 hatchet stakes, 13 inches.
- 2 hatchet stakes, 9 inches.
- 4 bevel edge square stakes.
- 6 common square stakes.
- 2 double seaming stakes with four heads.
- 3 round head stakes.
- 10 bench plates, 31 inches by 8 inches.
- 10 gas furnaces, double burner.
- 10 pair soldering coppers, 4 pounds each.
- 20 pairs shears, straight, No. 8.
- 5 pairs shears, circular, No. 8.
- 24 mallets, assorted, 2 and 3 inches.
- 1 pair bench shears.
- 24 setting hammers.
- 24 riveting hammers.
- 15 plumber scrapers.
- 6 raising hammers.
- 24 rivet sets, assorted sizes, 6-4-2.
- 24 scratch awls.
- 6 sets of solid punches.
- 6 sets of hollow punches.
- 2 wire cutters.
- 1 wire straightener.
- 1 steel rule, circumference.
- 24 common rules, 24 inches.
- 24 10-inch wing dividers.
- 3 vises.
- 2 anvils.
- 1 cornice brake, 48 inches.
- 24 drawing boards, T squares, triangles and compass dividers.

WOODWORKING CLASS.

RELATED MATHEMATICS.

In addition to the general work in arithmetic, material of the kind described below is presented.

Oral arithmetic precedes every lesson. After the exercises on the lessons have been assigned individual attention is given to pupils needing assistance.

1. Four fundamental operations. Drill in four fundamentals.
2. Fractions.
 - a. Factoring, oral and written.
 - b. Reduction. Reduce to lowest terms $\frac{4}{8}$, $\frac{12}{16}$, $\frac{18}{32}$, $\frac{10}{16}$, $\frac{16}{64}$. Change to sixteenths $\frac{3}{4}$, $\frac{3}{8}$, $\frac{1}{2}$.
 - c. Application of above fractions to common rule.
 - d. Four fundamental operations.

Typical examples:

- (1) What distance on a rule lies between $18\frac{1}{2}$ inches and $54\frac{3}{8}$ inches?
Between 12 inches and $7\frac{1}{8}$ inches?
- (2) Four points in a straight line are separated by these respective distances, $6\frac{1}{2}$ inches, $54\frac{3}{8}$ inches and $7\frac{1}{8}$ inches apart. How far is it from one extreme point to the other extreme point?
- (3) A piece of wood, $8\frac{7}{8}$ inches wide, was sawed into 4 strips of equal width. If the saw kerf was $\frac{1}{8}$ inch, how wide was each piece?

3. Decimals.

- a. Money.
- b. Connection with common fractions. Decimal equivalents of an inch. Change to decimals $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$. Change to fractions .125, .375, .5, .875. Estimation per M. Lath, shingles, lumber are bought on decimal systems. In buying or selling per M. (1,000) move decimal point three places to the left in amount bought and multiply by the cost per M.

Example:

Find the cost of 3,350 feet of pine at \$75 per M.

4. Mensuration.

- a. Linear. Drill on table of linear measure.
- b. Square measure.
 - (1) Figure the number of square feet in the floors and side walls of schoolroom. The square yard. The square.
- c. Board measure. The square foot *vs.* the board foot. What does the board foot have that the square foot does not have?
- d. Angles. What is the meaning of plumb? Level? What angle does a plumb wall make with a level floor? The circumference of a circle is measured into 360 degrees. Divide your circle into 90 degree sections. Divide one section into 45 degrees. One into 60 degrees and 30 degrees. The miter.
- e. Cubic measure.

Example:

A cellar for a house is dug to the dimensions 36 feet by 40 feet and 4 feet deep. How many cubic feet were removed? How many cubic yards?

5. Percentage. Examples in profit and loss:

- (1) The stock for a certain job cost \$65. The labor charge was \$45. How much should be charged for the job to make a profit of 45 per cent?
- (2) It cost \$8.50 to make a small cabinet. On account of being damaged it was necessary to sell same for \$6.29. What per cent loss?

6. Interest. How much will the interest on four \$50 Liberty Bonds of the fifth issue be for six months?

7. Estimates. Practically all estimating on jobs is oral, with an open discussion of the job, of the material to be used and the methods of construction. On all jobs on which a number of boys would work this has been done. It gives the boys a better understanding of the job and more interest is shown in the work if each boy is given the impression that suggestions as to joints and points of construction that he offers are listened to and considered.

8. Review. Frequent individual review.

RELATED ENGLISH.

In addition to the general course in English special attention is devoted to oral and written English on the following subjects:

1. Branches of woodworking.

- (1) Cabinet maker.
- (2) Carpenter.
- (3) Patternmaker.
- (4) Millman.

2. Tools.

Machines.

Lathe, buzz planer, cylinder planer.
Band saw.
Circular saw.

Hand Tools. Use and care.

Saws.	Gauge.
Planes.	Bevel.
Brace.	Rule.
Square.	Sandpaper.
Chisel.	Chalk.

3. Trade material.

(1) Kinds of wood.

Oak, spruce, pine, white, mahogany, hickory, maple, cedar,
walnut, chestnut.

Grain.

Meaning.
Close and open.
Annular rings.
Medular rays.
Warping.

(2) Fillers.

Reason for using.
Application.
Composition.

(3) Shellac.

Composition.
Application.

(4) Varnish.

Composition.
Application.
Conditions favorable and unfavorable.

(5) Glue.

Composition.
Atmospherical conditions.
Consistency.

(6) Sandpaper.

4. History of tools.

History of trade.

Famous men.

Production of materials.

Reference books.

DRAWING.

Object.—To enable boys, by their attempted drawing, to read a blueprint.

Use of perspective is eliminated.

1. Lines: Kinds and use.
 - Surface, straight.
 - Hidden, dotted.
 - Center, broken.
 - Dimensions.
2. Sketches.
 - Free-hand.
 - Scale accuracy.
 - Lettering.
3. Geometrical problems. Use of instruments.
 - Laying out of rectangle.
 - Erection of perpendicular.
 - Circle, common divisions, parts.
4. Object drawing:
 - (a) Ordinary object cube.
 - Working drawings. Machine part.

WOODWORKING SHOP EQUIPMENT FOR CLASSES OF TWENTY BOYS.

Floor space, 1,500 square feet or more.

Machines should be grouped at one end of the room.

Wall benches on two sides of room, also at least 16 benches, each with 52-inch by 22-inch tops. For unfinished work, or work under construction, a storage room at least 20 feet by 20 feet should be allowed.

Machine equipment.

- 1 circular saw, 16 inches.
- 1 band saw, 36-inch wheels.
- 1 buzz planer, 16 inches with safety head.
- 1 surfacer, 24-inch knives.
- 1 lathe with 8-foot bed — carriage and tool post.
- 1 lathe, 12-inch speed.
- 1 grinder.
- 1 upright boring machine.

Hand tools. (Cutting.) Hand saws.

- 10 cross-cut, 24-inch blade.
- 2 rip, 26-inch blade.
- 3 back, 10-inch blade.
- 3 compass, 14-inch blade.
- 1 miter box.

Planes.

- 12 No. 5 jack planes.
- 12 No. 9½ block.
- 1 No. 10 carriage makers' rabbet.
- 2 scraper planes.
- 1 router plane.
- 12 Stanley, No. 58 (spoke shaves).

Chisels.

- 10 sets — socket — bevel edge — each set containing one each — $\frac{1}{4}$ inch, $\frac{1}{2}$ inch, $\frac{3}{4}$ inch, $1\frac{1}{2}$ inch, 1 inch.

Gouges.

3 sets — each set containing one of each — inside ground, $\frac{1}{8}$ inch, $\frac{1}{4}$ inch, $\frac{3}{8}$ inch, $\frac{1}{2}$ inch, $\frac{3}{4}$ inch, 1 inch — outside ground, $\frac{1}{4}$ inch, $\frac{1}{2}$ inch, $\frac{3}{4}$ inch — regular sweep.

12 sloyd knives.

12 scrapers.

Laying out tools.

12 pairs 6-inch dividers.

1 pair trammels.

24 24-inch maple, brass-capped flat rules.

12 boxwood marking gauges.

4 9-inch bevels.

2 24-inch levels.

4 24-inch framing squares.

12 10-inch try squares.

2 12-inch combination squares.

Boring tools. (Hand.)

2 sets Jennings' auger bits.

2 sets gimlet bits.

6 bit braces, No. 8 sweep.

3 No. 1 hand drills.

2 No. 2 hand drills.

1 dozen countersinks.

1 expansive bit.

For machine.

Forstner bits — $\frac{1}{4}$ inch, $\frac{3}{8}$ inch, $\frac{1}{2}$ inch, $\frac{5}{8}$ inch, $\frac{3}{4}$ inch, 1 inch, $1\frac{1}{2}$ inches.

Full set of auger bits for machines also.

Miscellaneous tools.

24 Maydole hammers.

12 screw drivers.

12 screw driver bits.

6 pairs pliers, 6 inches.

12 pairs 6-inch calipers.

12 nail sets.

3 sets Buck-Amateur turning sets.

1 saw clamp.

1 saw set.

1 saw jointer.

12 India oil stones, No. $1\frac{1}{2}$.

6 India slip stones, No. $1\frac{1}{2}$.

12 small oil cans.

24 bench brushes.

6 mallets.

First aid kit.

12 No. 1 Jorgensen steel spindle hand screws.

12 No. 4 Jorgensen steel spindle hand screws.

6 3-foot steel bar clamps (Stearns).

6 30-inch eccentric steel clamps.

6 24-inch eccentric steel clamps.

1 electric glue pot.

1 shellac pot (copper).

WOODWORKING CLASS.
SHOP COURSE.

FUNDAMENTAL OPERATIONS.	Number of Weeks.	Type Jobs.	Special Content.	Evidence of Progress Required.
Tool room.	3	Delivering and receiving tools. Learning names of tools.	Learn names of tools. Learn to read 2-foot rule.	Knowledge of names of tools. Ability to read common rule.
Nails and screws.	1	Large and small filing boxes.	Proper handling of hammer. Selection of nails and screws.	Straight driving. Hammer held properly.
Use of hand saw.	1	Sawing boards.	Distinguish cross-cut and rip saws. Placing board and holding.	Clean cut. Correct methods.
Distinguishing woods.	2	Go through scrap box and classify wood.	Learn names and appearance of woods we have in our shop.	Ability to tell the woods we have in the shop.
Getting out stock.	2	Selecting stock for given job.	Board measure. Proper stock for given job.	Good judgment in selection and allowance for waste.
Hand planing.	2	Plane hard, narrow stock. Plane any flat surface.	Adjustment and handling plane. Right plane for given job.	Ability to plane. Good job of planing.
Sharpening tools.	2	Grind and hone plane blade and chisel.	Proper method of holding and grinding. Honing and stropping.	Fair job of sharpening.
Boring.	2	Holes for dowels on sectional book case. Test-tube racks.	Use of brace, Hand drill. Boring straight and clean holes.	Fair job of boring. Understand brace.
Joints.	3	Lay out and make from drawing butt, miter, mortise and tenon joints.	Comparative strength of different joints. Layout. Use of chisel.	Neat, close joints.
Gluing.	2	Gluing table top.	Use of clamps. Quick handling. Arrangement of stock.	Good job of gluing.
Scraping and sanding.	2	Scraping and sanding table top.	Selection of sandpaper. Sharpen scraper. Scraper vs. plane.	Good finished surface.

SHOP COURSE.—*Concluded.*

FUNDAMENTAL OPERATIONS.	Number of Weeks.	Type Jobs.	Special Content.	Evidence of Progress Required.
Wood finish.	2	Stain and finish sectional bookcase.	General knowledge of various finishes and fillers.	Neat work and intelligent choice.
Surfacer.	2	Sides and shelves for bookcases.	Operation of machine. Use of safety lever.	Correct handling of machine.
Lathe.	3	Simple turning. Chisel handles. Mallets.	Preparation of stock. Operation of machine. Speeds. Use of lathe tools.	Neat turning.
Band saw.	2	Sawing to line. Cutting off.	Operation of machine. Start and stop. Adjust. Saw to line.	Ability to saw to line. Use machine intelligently.
Circular saw.	2	Ripping. Squaring ends of pieces.	Safety. Operation of machine. Accessories.	Careful handling. Use of work and machine.
Buzz planer.	2	Parts for bookcases.	Operation of machine. Safety first.	Correct handling of machine.
Miscellaneous tools and machines.	2	Sand wheel. Boring in lathe.	Labor saving.	
General woodwork.	*	Any neat cabinet work. Act as shop foreman.	Introducing responsibility and making boy more confident.	

* Remainder of time in class.

SHOP WORK.

The woodworking shop is equipped with the following machine tools: Surfer, buzz planer, lathe, circular saw, band saw and grinder.

These are machines common to all woodworking shops, are of reliable make and are ordinary shop size.

As far as possible, all work done in the shop is of a practical nature, the only exercise work being that pupils are required to make from drawings some of the common joints such as butt, housed, miter, mortise and tenon.

Every effort is made to keep the shop routine and products as nearly as possible like those of a commercial shop.

At present the standard products of the shop are sectional bookcases, kitchen tables, test tube racks, taborets, coat racks, filing boxes and drawing boards. In addition to these standard articles pupils have made for themselves various articles of furniture ranging from foot stools to phonograph record cabinets. They have also made drawing tables and work benches for other shops.

On the standard products all work is done from blueprints or working drawings, made by the instructors; on work for himself, the boy must have a sketch or drawing of the article that he wishes to make; also he must figure the cost of the stock before he is allowed to start the job.

Before cutting the board the boy must show his lay out to the instructor for approval.

Very little jig and fixture work is done.

Where it is absolutely necessary that parts should match (such as the different sections of our bookcases) and where the articles should be uniform (as in the test tube racks) jigs are made and used for boring the different holes.

The fundamental operations in the course are independent with no necessary line of progression running through them. All boys, new to the class, are placed in the tool room for a short period. When a boy has satisfied the instructor that he has a fair knowledge of the common tools, he is given a simple job to test his skill in handling the tools.

The number of weeks that different boys might be required to be engaged in work under any one fundamental operation of the course would naturally vary, as the trade knowledge of different boys coming into the class varies. For instance, it would not be necessary to insist on a boy staying in the tool room for three weeks, if in the first period in class he shows that he is familiar with the common woodworking tools.

Again, owing to the variety of operations on the standard products, a great many times a boy would be credited with work on two or three different operations in the same class period. For instance, in getting out stock for a given job he could be checked on distinguishing woods, use of saw, getting out stock.

Each boy's progress is marked daily on the progress card. By consulting these cards the work or training required by each boy is noted and so far as possible a job giving practice on that operation is provided.

Record and Progression Card for Individual Pupils.

(3 x 8 blue card.)

No.....

WOODWORKING SHOP — PROGRESS CARD.

Name.....

Tool Room.....					
Sharpening Tools.....					
Hand Planing.....					
Distinguishing Different Woods.....					
Use of Hand Saw.....					
Getting Out Stock.....					
Boring.....					
Joints.....					
Nails and Screws.....					
Gluing.....					
Scraping and Sanding.....					
Wood Finish.....					
Band Saw.....					
Lathe.....					
Surfacer.....					
Buzz Planer.....					
Circular Saw.....					
Miscellaneous Machines.....					
General Wood Worker.....					

THE MASSACHUSETTS CONTINUATION SCHOOL LAW—
JULY 15, 1919.

(ADOPTED BY MOST OF THE CITIES AND TOWNS IN
MASSACHUSETTS BY REFERENDUM VOTE NOVEMBER 4,
1919.)

[GENERAL ACTS, CHAPTER 311.]

AN ACT RELATIVE TO THE ESTABLISHMENT AND MAINTENANCE OF CONTINUA-
TION SCHOOLS AND COURSES OF INSTRUCTION FOR EMPLOYED MINORS.

Be it enacted, etc., as follows:

SECTION 1. (1) Every city and town in which, during a calendar year ending December thirty-first, two hundred or more minors under sixteen years of age are regularly employed not less than six hours per day by authority of employment certificates or home permits described in section one of chapter forty-four of the Revised Laws, as amended, shall, and any other city or town may, through its school committee, local board of trustees for vocational education, or both, establish at the beginning of the next school year and maintain continuation schools or courses of instruction for the education of such minors under sixteen years of age who are regularly employed not less than six hours per day at home or elsewhere within the city or town, and for such others as may be required to attend as provided in section three. In determining the cities or towns required to establish continuation schools, or courses of instruction, minors who are employed during vacations by authority of employment certificates or home permits shall not be counted. The said schools or courses shall be in session during the same number of weeks in each year as the high schools of the city or town.

(2) When a city or town shall have established the said schools or courses, it shall, subject to the provisions of chapter forty-four of the Revised Laws, and amendments thereof not inconsistent herewith, and in accordance with the provisions of paragraphs 3 and 4 of this section require the attendance thereof of every minor under sixteen years of age who is engaged within the limits of the city or town in regular employment or business under the authority of an employment certificate, or in profitable employment at home under the authority of a home permit: *provided, however*, that upon application of the parent or guardian of the minor involved, instruction in the regular schools shall be accepted as instruction equivalent to that provided for by this act.

(3) The required attendance at said schools or courses shall be at the rate of not less than four hours per week for minors regularly employed not less than six hours per day at home or elsewhere, and at the rate of not less than twenty hours a week for minors who have secured employment certificates, and who are temporarily out of regular employment or business, provided

the school or course is in session twenty hours a week, and shall be between the hours of eight o'clock in the morning and five o'clock in the afternoon of any working day or days except Saturday.

(4) In the establishment and conduct of said continuation schools or courses of instruction, any city or town may take advantage of established educational agencies, and may utilize any suitable quarters which meet with the approval of the board of education; but, when established, the said continuation schools or courses shall be considered a part of the public school system of the municipality wherein the minors attending the same are employed.

(5) The time spent by a minor in a continuation school or course of instruction shall be reckoned as a part of the time or number of hours minors are permitted by law to work.

SECT. 2. Cities and towns maintaining such continuation schools or courses of instruction as are approved by the board of education as to organization, control, situation, equipment, courses of study, qualifications of teachers, methods of instruction, conditions of admission, employment of pupils and expenditures of money, shall receive reimbursement from the treasury of the commonwealth to an amount equal to one half the total sum raised by local taxation and expended for the maintenance of such schools or courses of instruction.

SECT. 3. (1) Any minor under sixteen years of age who has been regularly employed in a city or town other than that of his residence, and who is temporarily unemployed, may be required, under conditions approved by the board of education, to attend such a continuation school or such courses of instruction in the city or town of his residence.

(2) Whenever an employment certificate is issued to a minor under sixteen years of age, authorizing employment in a city or town other than that of his residence, a duplicate thereof shall be sent forthwith to the superintendent of schools of the city or town in which the employment is authorized.

SECT. 4. The employer of any minor between fourteen and sixteen years of age who is required to attend a continuation school or course of instruction as defined in this act, shall cease forthwith to employ such minor when notified in writing by the superintendent of schools, or by his representative duly authorized in writing, having jurisdiction over such minor's attendance, of his non-attendance in accordance with the compulsory attendance regulations as defined in this act. Any employer who fails to comply with the provisions of this section shall be punished by a fine of not less than ten nor more than one hundred dollars for each offence.

SECT. 5. The superintendent of schools having jurisdiction, or a person authorized by him in writing, may revoke the employment certificate or the home permit of any minor who fails to attend the said schools or courses of instruction when so required by the provisions of this act.

SECT. 6. (1) A city or town which refuses or neglects to raise and appropriate money for the establishment and maintenance of continuation schools or courses of instruction as required by this act, to be instituted not later than September first, nineteen hundred and twenty, shall forfeit from funds due it from the commonwealth a sum equal to twice that estimated by the board of education as necessary properly to establish and maintain such schools or courses.

(2) A sum equal to three-fifths of such forfeiture shall be paid by the treasurer and receiver general to the school committee of the delinquent city or town, and the school committee shall expend the same for the establishment and maintenance of continuation schools or courses of instruction therein to the same extent as if it had been regularly appropriated by the city or town for that purpose.

SECT. 7. This act shall take effect in any city or town upon its acceptance by the qualified voters thereof voting thereon at the annual state election in the current year.

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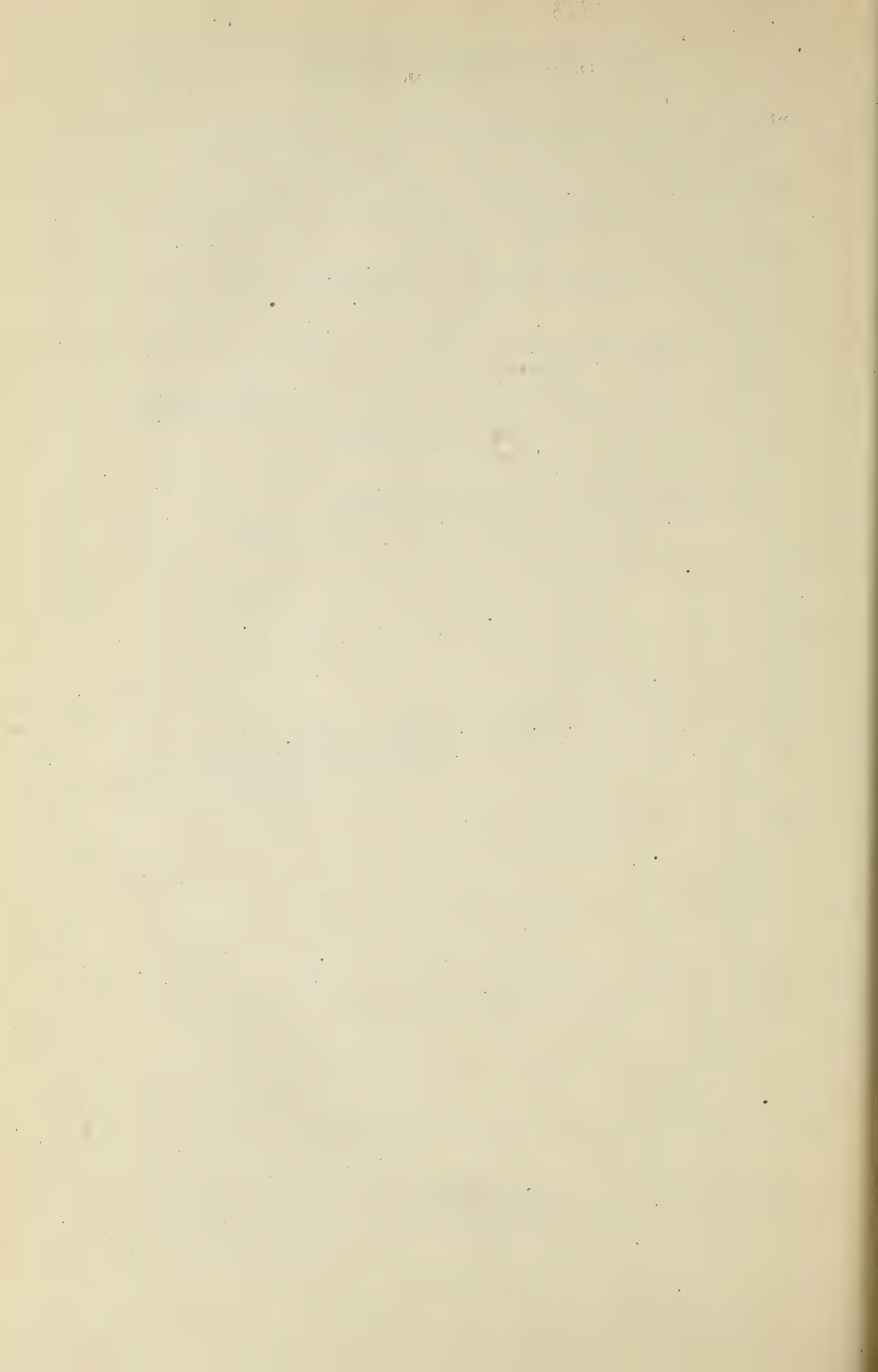
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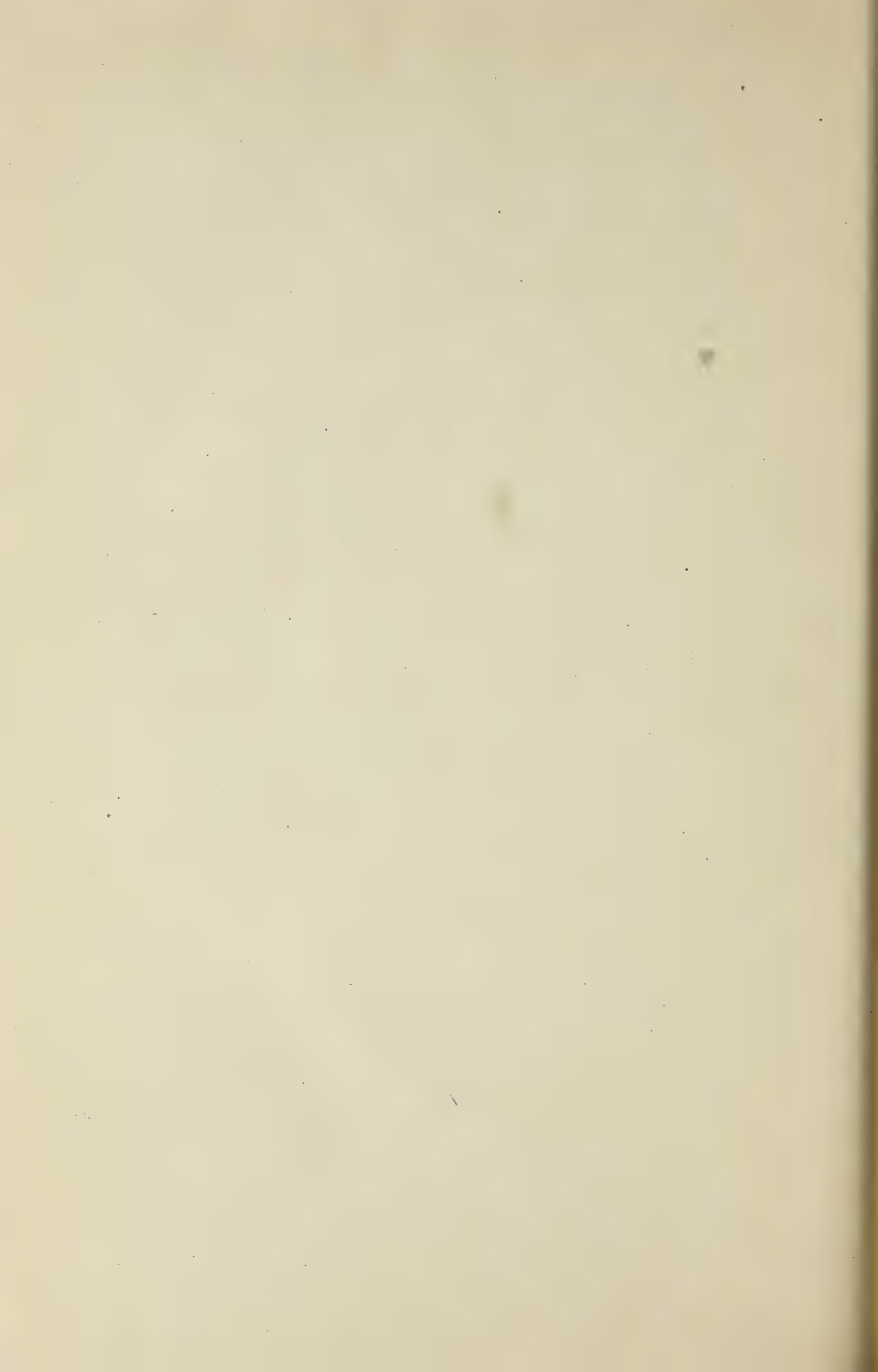
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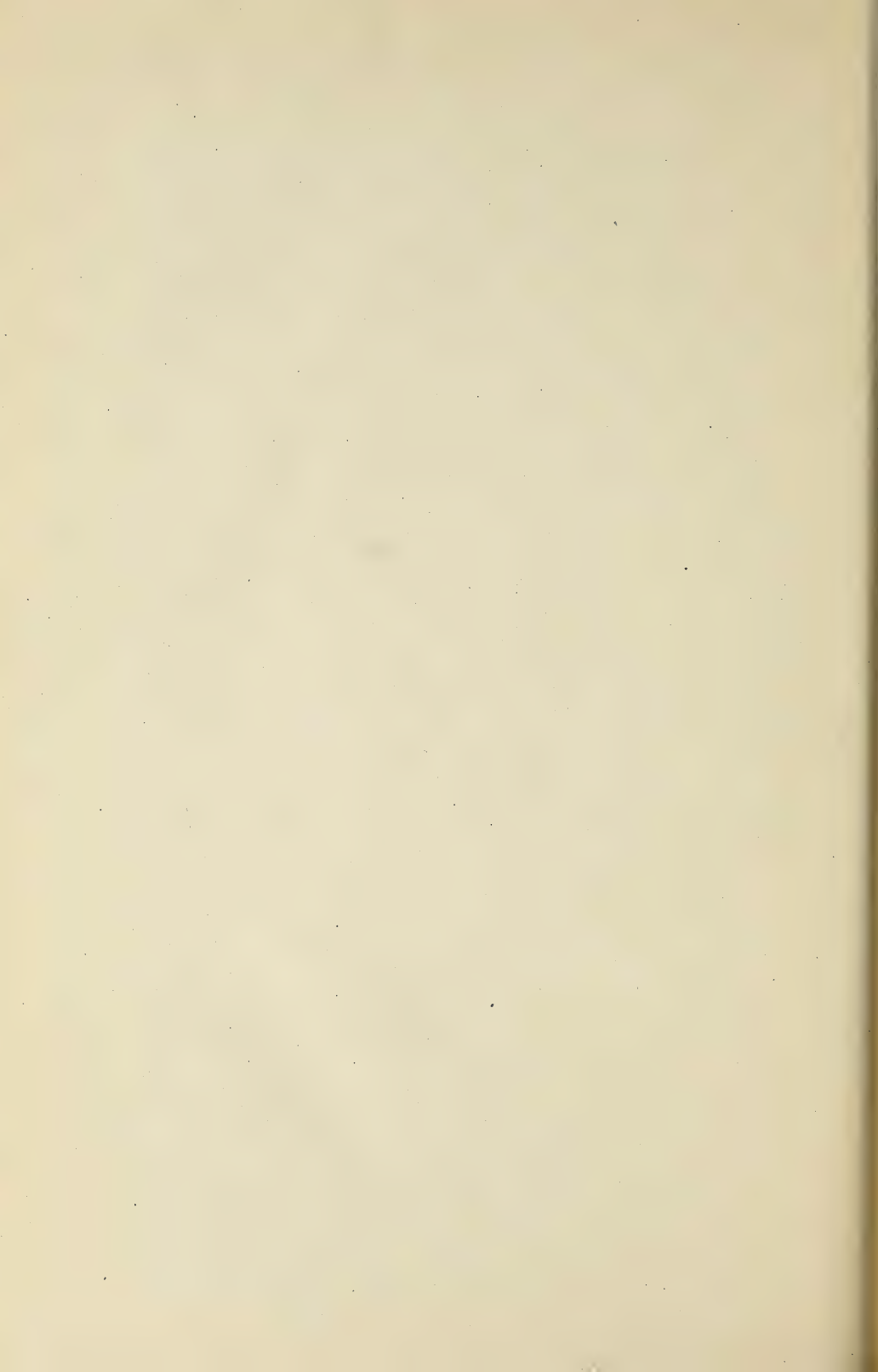
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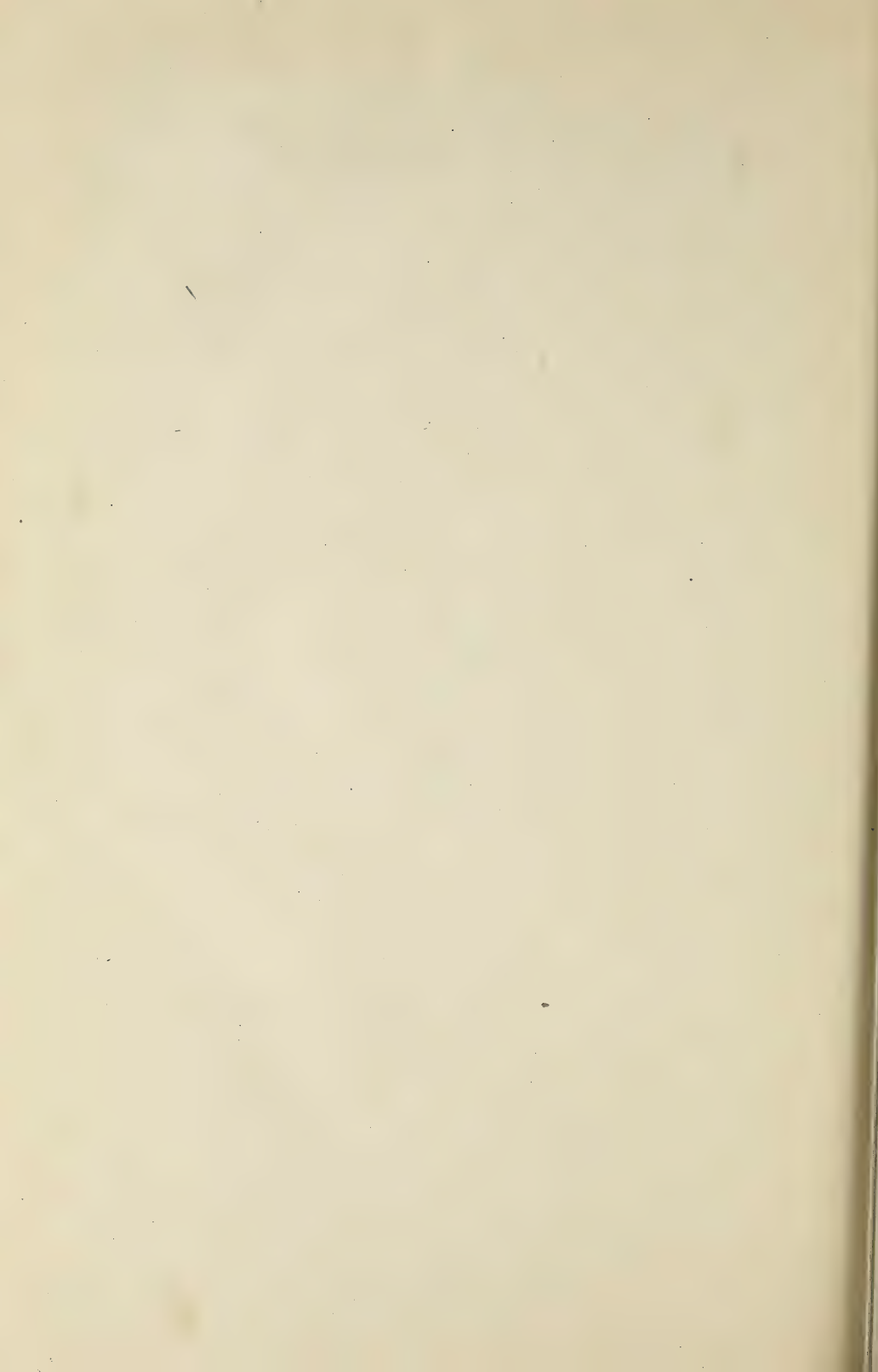
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SCHOOL DOCUMENT NO. 5—1919
BOSTON PUBLIC SCHOOLS

RULES OF THE SCHOOL COM- MITTEE AND REGULATIONS OF THE PUBLIC SCHOOLS OF THE CITY OF BOSTON

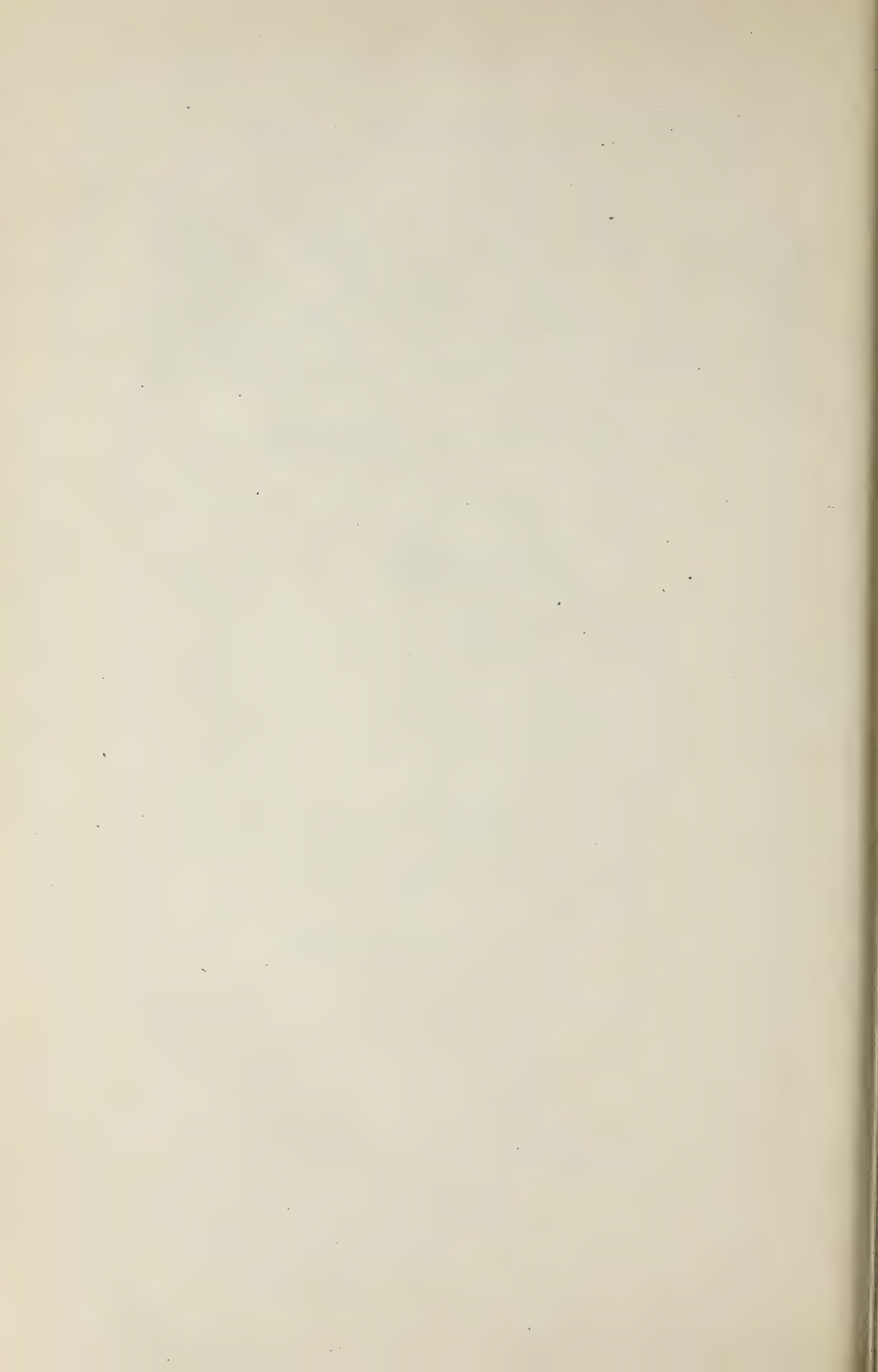


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GLOSSARY.

Board.— This word, used alone, applies only to the School Committee.

Board of Superintendents.— This term is always printed in full, and is applied to the Superintendent and the Assistant Superintendents when acting as an organized body.

Classification of Schools and Teachers.— The schools and teachers employed therein are divided into groups and classes as indicated in the following schedule:

GROUPS.	GRADES, CLASSES OR COURSES.
	Grades I. to VIII., inclusive. ¹
	Classes for conservation of eyesight.
	Hospital classes.
	Modern Language classes.
	Open-air classes.
Day Elementary.....	Prevocational classes.
	Rapid advancement classes.
	Special classes.
	Special English classes.
	Speech improvement classes.
	Ungraded classes.
	Kindergartens.
Day Intermediate....	Grades VII. to IX., inclusive.
	High Schools:
	Grades IX. to XII., inclusive.
	Grades X. to XII., inclusive.
Day Secondary.....	Latin Schools:
	Grades VII. to XII., inclusive.
	Grades IX. to XII., inclusive.
Normal School.....	Years I. to III., inclusive.
Day Clerical.....	For girls — length of course indeterminate.
	Boston Trade School (for boys) ² 2 or 4 year course.
Day Trade.....	Trade School for Girls ³ — length of course indeterminate.
Day Disciplinary.....	

¹ Includes Intermediate classes in modern foreign languages.

² Also offers evening classes for adults.

³ Also offers Trade Extension work.

GROUPS.	GRADES, CLASSES OR COURSES.
Continuation School..	<div> <div>Classes for boys at work, 14 to 16 years of age.</div> <div>Classes for girls at work, 14 to 16 years of age.</div> </div>
Day School for Immigrants.....	<div> <div> <div>Beginners' classes</div> <div>Intermediate classes</div> <div>Advanced classes</div> </div> <div>For minors and adults.</div> </div>
Evening Elementary	<div> <div>Division A classes: Elementary, sub-graduating, graduating.</div> <div>Division B classes: Beginners, intermediate, advanced.</div> <div>Division C classes: Cookery, dressmaking, embroidery, home nursing, millinery.</div> </div>
Evening Secondary...	<div> <div>Academic course.</div> <div>Commercial course.</div> </div>

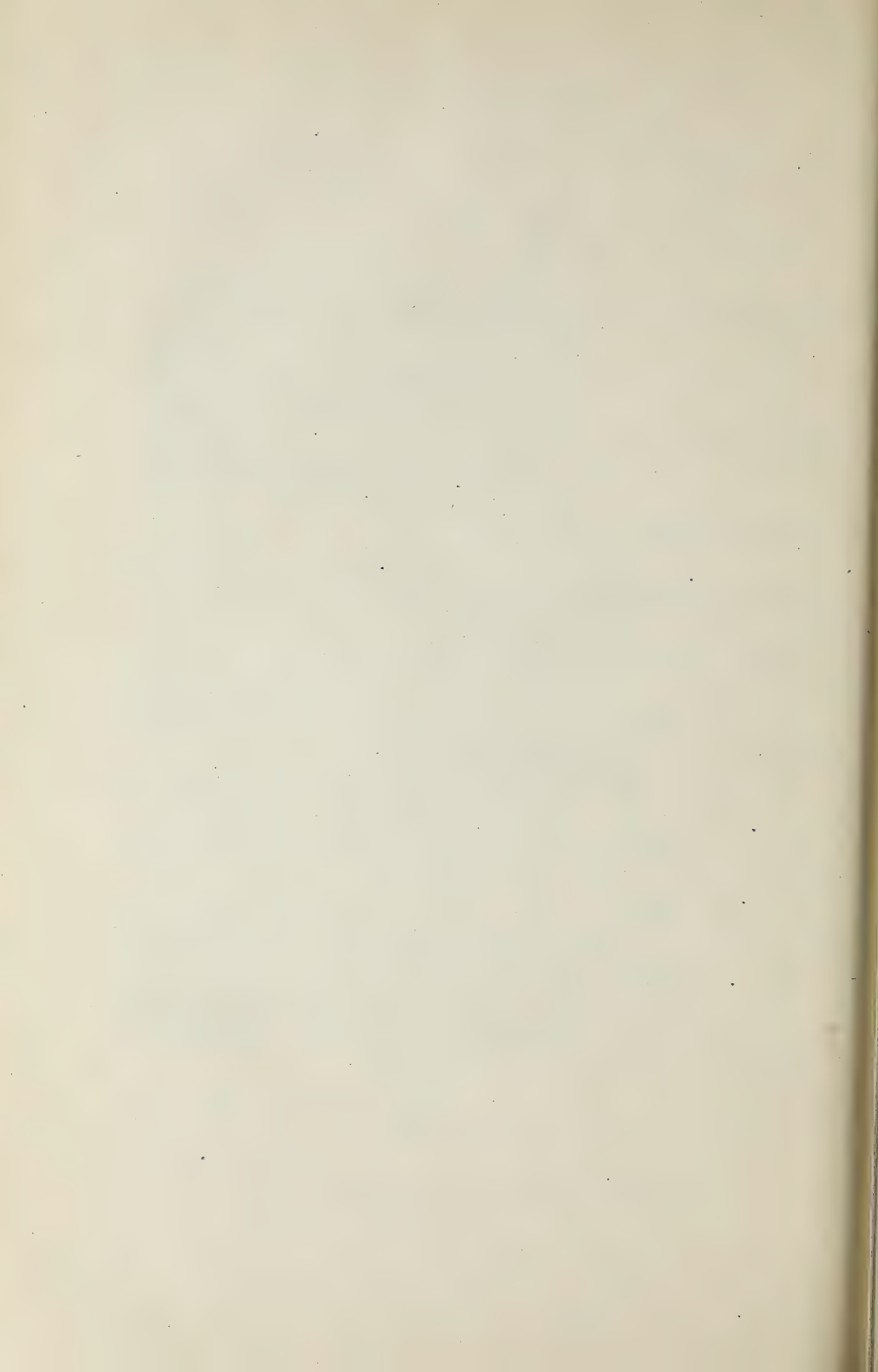
Regulations.— This term applies to the duties of teachers, members of the supervising staff, and other persons in the service of the Board except officers, janitors, and matrons.

Rules.— This term applies to the duties of the members and officers of the Board.

Schools.— This is an inclusive term, embracing all the public schools of the city. When particular schools or groups of schools are referred to, they are specifically designated.

Supervising Staff.— This term includes directors, first assistant directors, assistant directors, first assistants and assistants to directors, medical inspector of special classes, school physicians, supervising nurse, school nurses, instructors and assistant instructors of military drill.

Teachers.— This term includes principals of schools and districts and other persons employed in giving instruction who are not members of the supervising staff. The regulations, however, assign certain duties to principals and other duties to subordinate teachers, and in such cases a distinction is made between principals and teachers.



RULES.

CHAPTER I.

Organization and General Rules of Board.

SECTION 1. 1. The annual meeting of the Board for organization shall be held on the first Monday in February* of each year. The Board shall be called to order by the member present whose original election, as a member of the school committee of the city of Boston is of the earliest date, who shall preside until a chairman is chosen.

Organization.

Chairman *pro tempore*.

SECT. 2. 1. The officers of the Board shall consist of a chairman, secretary, treasurer of the corporation, business agent, schoolhouse custodian, superintendent, and not more than six assistant superintendents.

Officers.

SECT. 3. 1. The chairman and the treasurer of the corporation shall be elected annually at the meeting for organization.

Term of office of chairman and treasurer.

SECT. 4. 1. The secretary, business agent, and schoolhouse custodian, when duly elected by the Board, shall have a tenure of office during good behavior and efficiency.

Term of office of secretary, business agent, schoolhouse custodian.

SECT. 5. 1. The superintendent shall be elected during the month of June, 1906, and during the month of April in each sixth year thereafter, and shall hold office for the term of six years from the first day of September in the year of his election; *provided*, that his employment shall terminate on the thirty-first day of August next following his seventieth birthday.

Term of office of superintendent.

SECT. 6. 1. The assistant superintendents shall be elected during the month of June, 1906, and shall hold office as follows: One for one year, one for two years, one for three years, one for four years, one for five years, and one for six years, from the first day of September in said year; and annually thereafter one assistant superintendent may be elected during

Retirement age.

Term of office of assistant superintendents.

Retirement
age.

the month of April, who shall hold office for the term of six years from the first day of September in the year of his election; *provided*, that their employment shall terminate on the thirty-first day of August next following their seventieth birthday.

Term of office
of trustees of
teachers'
retirement
fund.

SECT. 7. 1. At the first meeting in the month of October of each year, two members of the Board shall be elected to serve as members of the board of trustees of the teachers' retirement fund for the term of two years.

Method of
election
of officers.

SECT. 8. 1. The election of officers of the Board and of the trustees of the teachers' retirement fund shall be by a *viva voce* vote, each member who is present answering to his name when it is called by the secretary, and stating the name of the person for whom he votes, or that he declines to vote. The secretary shall record every such vote. No ballots, written or printed, shall be used.

No ballots.

Votes
necessary to
elect.

SECT. 9. 1. The votes of a majority of the whole number of the members of the Board shall be necessary to elect any officer or trustee of the teachers' retirement fund, and to approve the appointment of a principal, director, teacher, janitor, or other employee; *provided, however*, that for the approval of the appointment of special teachers of gymnastics, calisthenics, or military drill a two-thirds vote of the Board shall be necessary.

Approval of
appointments
by a *viva voce*
vote.

2. The approval of appointments to permanent positions of teachers and of members of the supervising staff who are not rated on the eligible list shall be by *viva voce* vote, each member who is present answering yes or no when his name is called by the secretary, or stating that he declines to vote. The secretary shall record every such vote.

Appointments
laid over.

3. Appointments and removals of teachers and members of the supervising staff, to or from permanent positions, shall be laid over at least one week before final action by the Board.

Vacancies
filled.

SECT. 10. 1. If a vacancy occurs among any of the officers of the Board, the vacancy shall be filled by the election of a successor for the unexpired

term as soon as practicable, but on not less than one week's notice that such election is to occur.

SECT. 11. 1. If necessary, officers shall hold over after the expiration of their term until their successors shall have been duly elected and qualified. Officers to hold over.

SECT. 12. 1. The rules of the corporation shall be as follows: Rules of the corporation.

The chairman of the Board shall be president of the corporation *ex officio*.

The secretary of the Board shall be secretary of the corporation *ex officio*.

The treasurer shall be elected in the manner and at the time prescribed for the election of officers of the Board.

SECT. 13. 1. Regular meetings of the Board shall be held on the first and third Mondays of each month, except during July and August. Regular meetings of Board.

SECT. 14. 1. Upon not less than twenty-four hours' notice, special meetings of the Board may be called by the chairman, and shall be called by the secretary upon the written request of not less than two members of the Board. Special meetings of Board.

SECT. 15. 1. A majority of the Board shall constitute a quorum, but a less number may vote to send for absent members, to call the roll and record the names of absentees, or to adjourn. Quorum.

SECT. 16. 1. The sessions of the Board as a rule shall be open, but the Board may, at any time, by a majority vote, go into executive session. It shall, however, pass no votes in executive session. Meetings to be open. Executive sessions.

SECT. 17. 1. The minutes of the Board shall be published and distributed under the direction of the secretary. Minutes.

SECT. 18. 1. The order of business at meetings of the Board shall be as follows, unless the Board shall otherwise direct: Order of business.

(a.) Unfinished business of the preceding meeting.

(b.) Communications from the mayor, city council, and other city departments.

(c.) Communications from the superintendent, board of superintendents, or other officers of the Board.

(d.) Reports of committees.

(e.) Motions, orders, resolutions, communications, petitions, etc.

Chairman *pro tempore*.

SECT. 19. 1. In the absence of the chairman, the Board shall choose a chairman *pro tempore*.

Duties of presiding officer.

SECT. 20. 1. The presiding officer shall preserve order in meetings, decide all questions of order, subject to an appeal to the Board by any member, which appeal shall be decided without debate. He may take part in debate, and vote upon all questions before the Board.

Reconsideration.

SECT. 21. 1. The action of the Board on any question may be reconsidered at the same meeting by a majority vote; or, if any member who is not shown by a yea and nay vote to have voted against the prevailing side shall give notice in writing to the secretary before 12 o'clock M. of the day following that on which the meeting was held of his intention so to do, he may move a reconsideration at the next meeting of the Board. Only one motion for this purpose shall be in order.

Suspension of rules and regulations.

SECT. 22. 1. No rule or regulation of the Board shall be suspended except by the affirmative vote of four members.

Amendments to rules and regulations.

SECT. 23. 1. Amendments to the rules and regulations shall be read at two different meetings of the Board, and after such second reading may be adopted by the affirmative vote of three members.

Yeas and nays.

SECT. 24. 1. The yeas and nays shall be recorded upon any question whenever any member shall so request.

Motions in writing.

SECT. 25. 1. Motions shall be submitted in writing if any member shall so request.

Order of putting motions.

SECT. 26. 1. When motions are made naming sums or fixing times, the largest sum or longest time shall first be put to vote.

2. If a question be under debate, the only motions in order shall be (1) to adjourn, (2) to suspend the rules, (3) to lay on the table, (4) for

the previous question, (5) to postpone to a day certain, (6) to commit or recommit, (7) to amend, (8) to postpone indefinitely, which motions shall have precedence in the above order.

SECT. 27. 1. The affirmative vote of three members shall be necessary to pass any vote, order or resolution, except motions (1) to adjourn, (2) to lay on the table, (3) for the previous question, (4) to postpone to a day certain, (5) to commit or recommit, which shall require only a majority vote of the members present.

Votes required to pass orders, motions, etc.

SECT. 28. 1. A motion to adjourn shall always be in order, except when a member has the floor, or a question has been put and not decided.

Adjournment.

SECT. 29. 1. Motions to adjourn, to lay on the table, or to take from the table, and for the previous question, shall be decided without debate. The previous question shall be put in this form: "Shall the main question be now put?" And its adoption shall end all debate, and bring the Board to a vote upon pending amendments, if there are any, and then upon the main question.

Motions not debatable.

Previous question.

SECT. 30. 1. No school-house shall be named in honor of any living person. Any proposition to name a school-house shall lie over for at least two weeks, and four votes shall be required for favorable action thereon.

Naming of school-houses.

SECT. 31. 1. Any order or proposition relating to an extension to or change in the school system involving additional expense, or a contemplated expenditure for which provision has not been made in the annual appropriation order, shall be referred to and be reported upon by the business agent before final action thereon shall be taken.

Report on propositions involving additional expense.

SECT. 32. 1. The administrative offices of the Board shall be open, and the officers or their assistants present, every day throughout the year, Sundays, the 17th of June, and legal holidays excepted, from 9 o'clock A. M. to 5 o'clock P. M.; *provided*, that on Saturdays the offices may be closed at 1 o'clock P. M., except during July and August, and on the first Saturday in September, when they may be closed at 12 o'clock M.

Office hours, administrative offices.

Office hours,
supply room.

2. The supply room shall be open and the assistants employed therein present every day throughout the year, with the exceptions stated in the foregoing paragraph, from 8.30 o'clock A. M. to 5 o'clock P. M.; *provided*, that the chauffeur, the assistants employed on the trucks, and one supply room assistant shall begin work at 8 o'clock A. M., and *provided further*, that on Saturdays the supply room may be closed at 1 o'clock P. M., except during July and August and on the first Saturday in September, when it may be closed at 12 o'clock M.

CHAPTER II.

Duties of Secretary.

General duties.

SECT. 35. 1. The secretary shall keep a permanent record of the proceedings of the Board. He shall have charge of the documents and files of the Board.

Secretary of
corporation,
superintendent,
board of super-
intendents and
board of
apportionment.

SECT. 36. 1. He shall also serve as secretary of the corporation, to the superintendent, of the board of superintendents, and of the board of apportionment; shall keep their records, and have the custody of their files and documents.

Notices of
meetings and
action of
Board.

SECT. 37. 1. He shall issue notices of meetings of the Board, and shall transmit to members of the Board and to other officers, departments, and individuals attested copies of such votes, orders, and resolutions passed by the Board as may be necessary or required; and shall notify teachers and other employees of the Board of their appointment, transfer, dismissal, or leave of absence granted.

Certify to
eligibility of
appointees.

2. He shall certify to the business agent as to the eligibility of persons appointed as teachers and members of the supervising staff.

Distribute
minutes and
documents.

SECT. 38. 1. He shall distribute the minutes, documents, reports, and other publications of the Board.

Publish rules
and regula-
tions.

SECT. 39. 1. He shall, from time to time, publish editions of the rules and regulations, revised and corrected to the date of issue.

SECT. 40. 1. He shall prepare and publish a manual of the public schools on or before the first day of March in each year.

Publish
school
manual.

SECT. 41. 1. He shall, from time to time, publish the various courses of study, revised and corrected to the date of issue.

Publish
courses of
study.

SECT. 42. 1. He shall publish advertisements of examinations, and of the opening of the school terms.

Advertise
examinations
and opening
of terms.

SECT. 43. 1. He shall, from time to time, prepare and publish lists of the text and supplementary books authorized for use in the schools.

Publish lists
of text and
supplementary
books.

SECT. 44. 1. He shall attend to the preparation of certificates and diplomas when awarded, and deliver the same to the respective principals at least one day before they are required for distribution.

Prepare and
deliver
diplomas and
certificates.

SECT. 45. 1. He shall notify the various principals of action with respect to the granting of diplomas.

Notify of
granting of
diplomas.

SECT. 46. 1. He shall retain in his possession all papers upon which action has been taken by the Board at any meeting until the right to file a motion of reconsideration shall have expired, and if such notice be filed shall continue to retain the papers relating thereto until after the following meeting of the Board.

Hold papers
for recon-
sideration.

SECT. 47. 1. He shall be the custodian of the school committee building, and no accommodations shall be used therein except by the Board, its committees, and for office purposes by officers and members of the supervising staff regularly assigned thereto, without permission of the secretary, to whom all applications for the use of such accommodations for other purposes shall be made.

Custodian of
school com-
mittee building.

SECT. 48. 1. He may issue and cancel permits for the use of school premises for other than the regular work of the schools in accordance with the regulations.

Issue permits
for use of
school
premises.

SECT. 49. 1. He shall annually make inquiry into the conduct and extent of savings systems conducted in the schools, and shall report the result of his investigations to the Board.

Report on
school savings
systems.

Appoint
assistants.

SECT. 50. 1. He may appoint an assistant secretary and such assistants as shall be necessary, subject to the approval of the Board.

Delegated
authority.

2. He may delegate to the assistant secretary such part of his authority as he may deem expedient, which shall be exercised under the direction of the secretary who shall be responsible therefor.

CHAPTER III.

Duties of Superintendent.

Executive
officer.

SECT. 55. 1. The superintendent shall be the executive officer of the Board in all matters relating to instruction and discipline in the schools.

Attend and
participate in
meetings of
Board.

2. He shall, except when the election or salary of the superintendent is under discussion, attend all meetings of the Board, and shall have the same right as a member to participate in debate and to submit orders, reports, communications and recommendations.

Report on
matters
referred.

3. He shall consider and report upon matters referred to him by the Board or sub-committees thereof.

File reports.

4. He shall keep on file in his office and easily accessible for reference by members of the Board, and such others as he shall deem proper, all reports made to him by the officers of the Board, teachers and members of the supervising staff.

Annual report
of membership
of schools.

5. He shall, annually, as soon as may be after September 1, submit to the Board in print a statement of the membership of the schools.

Annual report.

6. He shall, annually, at the close of the school year, or as soon thereafter as may be practicable, submit a printed report to the Board, giving an account of the duties he has performed, together with such facts and suggestions relating to the schools as he may deem expedient.

Annual
statistics.

7. He shall, annually, at the close of the school year, or as soon thereafter as may be practicable, submit a printed report to the Board, setting forth the statistics of the public schools for the preceding calendar and school years, including the total registration, average membership, aver-

age attendance, number of pupils per teacher, number of teachers, etc.

8. He shall prepare the annual returns to the State Board of Education required by law.

Prepare annual returns to State Board of Education.
General duties.

SECT. 56. 1. He shall see that the regulations and orders of the Board affecting the supervision and management of the schools and the instruction given therein are enforced; and may make such supplemental regulations and give such instructions, not contrary to the rules and regulations or orders of the Board, as he may deem necessary for the proper conduct and management of the schools. He may, at his discretion, exercise any or all of the duties assigned to assistant superintendents, teachers and members of the supervising staff.

SECT. 57. 1. He shall be chairman of the board of superintendents, and shall assign to each assistant superintendent such duties as he may deem best, and may delegate to or recall from any one or more assistant superintendents any part of his authority, except such as relates to the appointment, reappointment, assignment, promotion, transfer, suspension, or removal of teachers and members of the supervising staff; to the approval of plans of school buildings; and to recommendations to the Board, or other relations with it. Such delegated authority shall be exercised under the direction of the superintendent, and he shall be responsible therefor.

Relations with board of superintendents.

2. He may require reports from assistant superintendents, and may include them in an appendix to his own annual report.

Reports from assistant superintendents.

SECT. 58. 1. He shall appoint, reappoint, designate, assign, promote, transfer and remove teachers, members of the supervising staff, clerical assistants, bookkeepers, and other persons employed in similar capacities in the schools, in accordance with the regulations.

Appoint, transfer and remove teachers and members of supervising staff.

2. He may reprimand or suspend with or without pay, for a period not exceeding one month, any teacher, member of the supervising staff, clerical assistant, bookkeeper, and other persons employed in similar capacities in the schools for due cause, and shall keep a record of all such cases, with the

Reprimand or suspend teachers, members of supervising staff, clerical assistants, bookkeepers and other persons.

reason for his action thereon, which shall be open to inspection by the members of the Board.

Grant leaves of absence.

3. He may grant leave of absence to teachers, members of the supervising staff, clerical assistants, bookkeepers and other persons employed in similar capacities in the schools, in accordance with the regulations.

Order examinations.

4. He may order general examinations of candidates for certificates of qualification, and may order special examinations in his discretion.

Prepare courses of study.

SECT. 59. 1. He shall prepare and submit to the Board the courses of study to be pursued in the several schools, in accordance with the regulations.

Report upon books, maps and charts.

2. He shall recommend the adoption or discontinuance of text and supplementary books, dictionaries, cyclopedias, atlases, globes, maps and charts, in accordance with the regulations.

Determine forms of records.

3. He shall determine what registers, records and forms shall be used in the schools, and prescribe the manner in which they shall be kept.

Establish regulations for school athletics.

4. He shall from time to time establish regulations for the management and control of school athletics and enforce the same.

Investigate cases of suspension or discipline of pupils.

SECT. 60. 1. He shall investigate all cases of suspension or discipline of pupils which the principals and assistant superintendents are unable to adjust, and, in the event of his inability to settle the same, refer them to the Board for final determination.

Investigate non-attendance.

2. He shall make investigations as to the number and condition of children who are not attending the schools and who are required by law to do so; endeavor to ascertain the reasons for such non-attendance, and suggest and apply the proper remedies.

Enforce compulsory education laws.

3. He shall see that the provisions of the compulsory education laws are complied with, and shall have general supervision and control over the attendance officer force.

Supervision and control over licensed minors.

4. He shall see that the laws of Massachusetts, the ordinances of the city of Boston, and the regulations of the Board with respect to licensed minors under sixteen years of age are complied

with, and shall have general supervision and control over the supervisor of licensed minors.

SECT. 61. 1. He may suspend the sessions of the schools in accordance with the regulations.

Suspension
of school
sessions.

SECT. 62. 1. He may appoint such assistants in his own office, and to assist directors and heads of departments, as he may deem expedient, subject to the approval of the Board.

Appoint office
assistants.

SECT. 63. 1. He shall perform all other duties and exercise all other authority conferred upon him by the regulations or orders of the Board.

Other duties
and
authority.

CHAPTER IV.

Duties of Board of Superintendents; Examination and Certification of Teachers and Members of Supervising Staff; Eligible Lists.

SECT. 65. 1. The board of superintendents shall consist of the superintendent and the assistant superintendents.

Membership.

2. The superintendent shall be chairman of the board of superintendents *ex officio*, and when present shall preside at meetings of said board. In his absence, the presiding officer shall be the vice-chairman, who shall be elected annually in September by the board of superintendents.

Chairman and
vice-chairman.

3. A quorum of the board of superintendents shall consist of four members.

Quorum.

4. The secretary of the school committee shall be secretary of the board of superintendents, shall keep its records, and have the custody of its files and documents.

Secretary.

5. Meetings of the board of superintendents shall be held regularly on Fridays during the school term, except on days when the sessions of the schools are suspended; and special meetings shall be held at the call of the chairman.

Meetings.

SECT. 66. 1. The board of superintendents shall give written opinions on any question when so required by the superintendent, the Board, or any sub-committee thereof; and may present to

Reports and
recommendations.

the Board recommendations on its own initiative whenever occasion warrants.

Report on
courses of
study.

SECT. 67. 1. The board of superintendents shall report with recommendations to the superintendent concerning all new courses of study and on any modifications of or deviations from established courses of study.

Report on
text and
supplementary
books, etc.

SECT. 68. 1. The board of superintendents shall report with recommendations concerning the introduction or discontinuance of a text or supplementary book, dictionary, cyclopedia, atlas, globe, map, or chart.

Approve
reference books
and educational
material.

SECT. 69. 1. The board of superintendents shall approve books of reference and educational material used in the schools, except dictionaries, cyclopedias and atlases, in accordance with the regulations.

Prepare
questions
and conduct
certificate
examinations.

SECT. 70. 1. The board of superintendents shall conduct examinations of candidates for certificates of qualification as teachers and members of the supervising staff, and prepare and adopt the questions to be used at such examinations.

Establish
eligible lists for
appointment.

2. The board of superintendents shall establish lists of candidates eligible for appointment as teachers and members of the supervising staff who have been examined by said board; also eligible lists of Boston Normal School graduates.

Establish
eligible lists for
promotion to
rank of
master.

3. The board of superintendents shall biennially establish lists of candidates eligible for promotion to the rank of master, day elementary schools.

Establish other
eligible lists
for promotion.

4. The board of superintendents shall establish informally lists of candidates eligible for promotion to other ranks at the request of the superintendent.

Distribute
information
concerning
examination
and certificate
candidates.

5. The board of superintendents shall prepare and distribute information with regard to the date of holding, character and scope of such examinations; shall determine the weight to be given to each subject included therein; and shall issue to each person passing such examinations a certificate to that effect.

Certificate
Normal
School
graduates.

6. The board of superintendents shall issue certificates of qualification to graduates of the Boston Normal School in accordance with the provisions of this chapter.

SECT. 71. 1. The board of superintendents shall issue licenses and temporary certificates in accordance with the provisions of this chapter.

Issue
licenses and
temporary
certificates.

SECT. 72. 1. The board of superintendents shall conduct promotional examinations of teachers and members of the supervising staff in accordance with the regulations, and shall issue to each person passing these examinations a certificate to that effect.

Conduct
promotional
examinations
and certificate
candidates.

2. The board of superintendents shall certify to the business agent the names of teachers and members of the supervising staff who have successfully passed the promotional examinations.

Certify to
business agent
names of
persons passing
promotional
examinations.

SECT. 73. 1. The board of superintendents shall conduct examinations of candidates for admission to the Normal, Latin, day and evening high schools in accordance with the regulations, and shall prepare the questions used in such examinations, and shall determine the admission of candidates.

Conduct
examinations
for admission
to Normal,
Latin and high
schools.

SECT. 74. 1. The board of superintendents shall, annually, in the month of June, obtain from the principals of the various schools, on suitable forms, reports of the standing in scholarship and conduct of the pupils belonging to the graduating grades and classes, with the recommendations of the principals with respect to the granting of diplomas, and shall determine the award of the same.

Determine
award of
day school
diplomas.

2. The board of superintendents shall determine the award of diplomas to pupils successfully completing in the summer review schools the prescribed course of study of the day elementary or day high schools.

Determine
award of
diplomas,
summer
review schools.

3. The board of superintendents shall, near the close of the term of the evening schools, obtain suitable reports from the respective principals of the standing in scholarship and conduct of the pupils in such schools who are candidates for diplomas, and shall decide the award of certificates and diplomas.

Determine
award of
evening
school
certificates and
diplomas.

4. The board of superintendents shall determine the award of Franklin medals.

Determine
award of
Franklin
medals.

SECT. 75. 1. The assistant superintendents shall, under the direction of the superintendent,

Visit and
report on
schools.

visit the schools as often as practicable, also the Suffolk School for Boys, for the purpose of obtaining information regarding the efficiency of the teachers, the progress of the pupils, the observance of the regulations and courses of study, and the general condition of the schools. The results of such visits, with such remarks, recommendations, and suggestions as may seem desirable, shall be reported to the superintendent in such manner and at such times as he shall prescribe. Such reports shall be kept on file in the superintendent's office and be open only to the inspection of the members of the Board.

Represent
superintendent
and exercise
authority.

SECT. 76. 1. The assistant superintendents are the direct representatives of the superintendent in the schools or districts to which they are assigned, and as such may exercise full authority not contrary to the rules and regulations, the orders of the Board, or the instructions of the superintendent with respect to all matters of organization, instruction and discipline. They may, in their discretion, exercise any or all the duties assigned to principals or teachers in such schools or districts.

Other duties
and authority.

SECT. 77. 1. The board of superintendents and each assistant superintendent shall perform all other duties and exercise all other authority conferred upon them by the regulations.

Examinations for Certificates of Qualification.

Date of
examinations.

SECT. 78. 1. Examinations for certificates of qualification to teach in the schools shall be held during the week beginning with the last Monday in January in each year, under the direction of the board of superintendents, which board shall determine for what grade or grades of certificates each such examination shall be held. Other examinations may be held at the discretion of the superintendent. Notice of such examinations shall be given by advertisement in at least four daily newspapers published in the city of Boston.

Conduct of
examinations.

2. These examinations shall be conducted by the board of superintendents, with the assistance of such directors, principals, or other persons as

the board of superintendents may deem necessary. No person not actually engaged in taking, conducting, or assisting at any examination, except members of the Board, shall be present thereat.

3. The examinations given as aforesaid shall be designed to test the training, knowledge, aptness for teaching, and character of the candidates.

Purpose of examinations.

4. The marking of each paper shall be made on a scale, and in accordance with a plan to be determined by the board of superintendents.

Marking of papers.

SECT. 79. 1. The board of superintendents shall not admit to such examinations persons who are not citizens of the United States, or, in the case of women, unless they have filed their declaration of intention to become citizens, nor persons who shall have reached their fortieth birthday on or before the thirtieth day of June next following the date of the examination, and may exclude therefrom any candidate who, in the opinion of said board of superintendents, is ineligible for admission thereto; *provided*, that the restriction as to age shall not affect applicants for certificates which do not render the holders eligible for appointment to permanent positions as members of the supervising staff or as teachers in the public schools.

Requirements for admission to examinations, citizenship, age limit, etc.

Lists of Certificates of Qualification.

SECT. 80. 1. Certificates of qualification may be granted by the board of superintendents to persons who present satisfactory evidence of good character, health, scholarship, and satisfactory and documentary evidence of the date of birth, and who successfully pass the required examinations as follows:

Schedule of certificates of qualification.

I. *Normal School, Head Master:* To head masters of the Boston Normal School.

I. Normal School, Head Master.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade; evidence of five years' successful experience in teaching and governing regular graded day schools; evidence of good administrative ability.

This certificate includes certificate designated II.

II. Normal
School.

II. *Normal School*: To masters, junior masters, first assistants, and assistants of the Boston Normal School.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade; evidence of five years' successful experience in teaching and governing regular graded day schools.

III. High and
Clerical
School, Head
Master.

III. *High and Clerical School, Head Master*: To head masters of day high schools and of day clerical schools, and to principals of continuation schools.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade; evidence of five years' successful experience in teaching and governing regular graded day schools; evidence of good administrative ability.

This certificate includes certificates designated IV., V., XII., XIII., XIV., XV.; also certificates for special studies valid in day high schools.

IV. High
School.

IV. *High School*: To masters, junior masters, first assistants, and assistants of day high schools.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade; evidence of three years' successful experience in teaching and governing regular graded day schools.

Work done for the Master's degree in Education, in accordance with a plan approved by the board of superintendents, may be accepted as equivalent to two of the three years' successful experience in teaching and governing regular graded day schools, *provided* the college authorities shall in each case

certify to the satisfactory completion of the required work for the said degree.

A candidate who elects Group XIII. (in which group salesmanship is the major subject) for his advanced examination shall, in addition to the foregoing requirements, have completed a one-year course in salesmanship approved by the board of superintendents, which course may be accepted by said board as equivalent to one of the required three years' experience in teaching.

Instructors and assistant instructors in chemistry, in commercial branches, in manual arts, and in salesmanship in day high schools, and vocational assistants in day high schools who have satisfactorily completed seven years of permanent service in the Boston public schools in any of these ranks, and teachers permanently employed in any of these ranks under an XI. Special, Valid in Day High Schools certificate, who, while so employed, obtain a degree from a college or university approved by the board of superintendents, may thereby become eligible for the certificate of qualification IV. High School, subject to such examination as the board of superintendents may determine; *provided*, that no person shall be eligible for promotion under the IV. High School certificate until he shall have served at least one full year on the maximum of the salary of his rank. In the event of arbitrary advancement on the salary schedule having been granted by action of the Board, he shall serve such additional time on the maximum of the salary of his rank before promotion, as the time necessary to reach the maximum has been shortened by such advancement.

This certificate includes certificates designated V., XIII., XV.; also certificates for special studies valid in day high schools.

V. *High School, Special*: To teachers of V. High School, Special. mechanical branches in the Mechanic Arts High School of the ranks of master, junior master, and instructor.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade, and evidence of three years' successful experience in teaching and governing regular graded day schools; or, three years' successful experience in teaching mechanical branches in an institution of high school or college grade approved by the board of superintendents; or, five years' successful industrial experience in the work of one of the mechanical branches; or, one year's successful experience in the Mechanic Arts High School under a license granted by the board of superintendents.

This certificate includes certificates designated XIII., XV.

Licenses.

The board of superintendents may issue licenses to teach mechanical branches in the Mechanic Arts High School to persons who present satisfactory evidence of good character and health, and who, upon investigation, shall be found to have had five years' satisfactory industrial experience in the work of the mechanical branch which the candidate is to teach, or two years' successful experience in teaching mechanical branches in an institution of high school or college grade approved by the board of superintendents.

Licenses shall expire not later than the thirty-first day of August of the second year following the date of issue, and shall not be extended or renewed.

VI. Elementary School,
Master.

VI. *Elementary School, Master:* To masters of day elementary schools, and of day industrial schools, and to principals of continuation schools.

The requirements for this certificate are: Graduation from a college or from a normal school approved by the board of superintendents; evidence of five years' successful experience in teaching and governing regular graded day schools; evidence of good administrative ability.

After June 1, 1920, all candidates for this certificate shall be graduates of a college approved by the board of superintendents.

This certificate includes certificates designated VII., VIII., XIII., XIV., XV.

VII. *Elementary School, Class A:* To sub-masters, masters' assistants, first assistants in charge of day elementary schools, and first assistants, grammar schools.

VII. Elemen-
tary School,
Class A.

The requirements for this certificate are: Evidence of three years' successful experience in teaching and governing regular graded day schools.

After June 1, 1920, all candidates for this certificate shall be graduates of a college or of a normal school approved by the board of superintendents.

This certificate includes certificates designated VIII., XIII., XV., XXXIII. (See note under Certificate XXXIII., Intermediate.)

VIII. *Elementary School, Class B:* To assistants of day elementary schools in Grades I. to VI., inclusive, and to assistants of the Horace Mann School for the Deaf.

VIII. Elemen-
tary School,
Class B.

The requirements for this certificate are: Graduation from a college or from a normal school approved by the board of superintendents, and evidence of two years' successful experience in teaching and governing regular graded day schools; or, graduation from the Boston Normal School.

This certificate includes temporary service in Grades VII., VIII. and IX., and certificate designated XV. (See note under certificate XXXIII., Intermediate.)

IX. *Elementary School, Special:* To assistants of day elementary schools, and to substitutes for sub-masters, and for first assistants of day elementary schools, and for assistants of day high schools.

IX. Elemen-
tary School,
Special.

The requirements for this certificate are: Graduation from a college or university approved by the board of superintendents, and graduation from the Boston Normal School.

This certificate includes certificates designated XIII., XV.

X. (a.) Kindergarten.

X. (a.) *Kindergarten*: To teachers of kindergartens.

X. (b.) Normal, Kindergarten-Primary.

X. (b.) *Normal, Kindergarten-Primary*: To teachers of kindergartens and to assistants of day elementary schools in Grades I. to III., inclusive.

The requirements for these certificates are:

(a.) For the kindergarten certificate: A diploma from a high school approved by the board of superintendents and evidence of one year's experience in teaching a regular kindergarten subsequent to graduation from a kindergarten training school approved by the board of superintendents.

(b.) For the Normal, kindergarten-primary certificate: Graduation from the Boston Normal School and completion of the kindergarten-primary course therein.

XI. Special.

XI. *Special*: To members of the supervising staff, to teachers of special studies and of special schools, to industrial instructors of day high schools, and to vocational assistants in day high schools.

The requirements for this certificate are:

Supervising Staff.

Supervising Staff.

For members of the supervising staff: Such as the board of superintendents may determine, except as hereinafter specified.

Manual Arts.

Manual Arts.

For first assistant director of manual arts: A diploma from an art school or from a manual training school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of five years' successful supervisory experience* in teaching drawing or manual training.

For assistant directors of manual arts: A diploma from an art school, from a manual training school or from an agricultural school, approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of four

*The direction and inspection of the work of teachers.

years' successful supervisory experience* in teaching drawing, manual training, or agriculture.

For first assistant and assistants in manual arts: A diploma from an art school or from a manual training school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of three years' successful supervisory experience* in teaching drawing or manual training.

Military Drill.

For instructors and assistant instructors of military drill: Completion of a three years' course of study in a high school or evidence of equivalent academic education or service as a commissioned officer in the army of the United States; and a two years' course of instruction in military tactics at a military academy approved by the board of superintendents, or two years' service in a regular state militia; and evidence of two years' successful experience in teaching military tactics. Military Drill.

Music.

For assistant directors of music: Evidence of academic education satisfactory to the board of superintendents, and evidence of three years' successful supervisory experience* in teaching music. Music.

For assistants in music: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of two years' successful supervisory experience* in teaching music.

Physical Training.

For assistant directors of physical training: A diploma from a college, university or medical school approved by the board of superintendents or from an institution of as high a grade; and evidence of three years' successful experience in teaching and governing schools, a satisfactory portion of which must have been in physical training. Physical Training.

*The direction and inspection of the work of teachers.

Certificates Valid in Day High Schools.

Certificates
Valid in Day
High Schools.

For the special certificate in commercial branches: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine, which shall include one year's experience in a high school; *provided*, that teachers who have been permanently employed in the public day schools of Boston for at least three years, may be admitted to the examinations for the special certificate in commercial branches, but shall not receive such certificate nor be rated on the eligible list, until they shall have completed at least one year's experience in a high school approved by the board of superintendents, either under a permanent appointment, a temporary certificate, or assignment.

For instructors in manual arts, drawing: A diploma from an art school approved by the board of superintendents, or evidence of equivalent academic education, and evidence of three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

For instructors in manual arts, shop work: Graduation from a high school or evidence of equivalent academic education; at least two years' supplementary education; three years' successful experience in teaching shop work; and one year of trade experience.

For the special certificate in music: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

For the special certificate in physical training: A diploma from a high school approved by the

board of superintendents, or evidence of an equivalent academic education; graduation from a school offering a course in physical training at least two years in length, approved by the board of superintendents; and evidence of two years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

For the special certificate in salesmanship: A diploma from a college or from a normal school approved by the board of superintendents; evidence of three years' successful experience in teaching and governing regular graded day schools and successful completion of a one-year course in salesmanship approved by the board of superintendents, which course may be accepted by said board as equivalent to one of the required three years' experience in teaching.

This certificate includes service as teacher of salesmanship in the continuation schools.

NOTE.—Certificates in special studies valid in day high schools are valid for the same subjects in evening high schools and evening elementary schools, except for state-aided classes.

Industrial Instructors.

For the industrial instructor in household science certificate: Evidence of three years' successful experience in teaching household science and arts in a Boston day high school.

Industrial
Instructors.

For the industrial instructors in dressmaking and millinery certificates: Either a diploma from an institution giving approved courses in industrial training and two years' successful experience in teaching industrial subjects; or four years' trade experience, a satisfactory portion of which shall include experience in teaching, and such evidence of business ability as the board of superintendents may determine; or three years' successful experience in teaching industrial subjects in the High School of Practical Arts; or four years' successful

experience in teaching industrial subjects in a day industrial school approved by the board of superintendents.

Vocational Assistant, Day High Schools.

Vocational
Assistant,
Day High
Schools.

For the vocational assistant in day high schools certificate: Either a diploma from a college or university approved by the board of superintendents or from an institution of as high a grade, and evidence of three years' experience in teaching, a satisfactory portion of which shall have been in a vocational school or in such vocational work as the board of superintendents shall approve; or, graduation from a high school and a normal school approved by the board of superintendents, and evidence of five years' experience in teaching, a satisfactory portion of which shall have been in a vocational school or in such vocational work as the board of superintendents shall approve.

This certificate covers the rank of vocational assistant, Department of Vocational Guidance.

*Certificates Valid in Day Elementary Schools,
Intermediate Schools and Classes.*

Certificates
Valid in Day
Elementary
Schools, Inter-
mediate
Schools and
Classes.

For the cookery certificate: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education, and graduation from an approved course of instruction in cookery; and evidence of one year's successful experience in teaching cookery in regular graded day schools subsequent thereto, which teaching experience requirement may be waived for graduates of the Boston Normal School.

For the sewing certificate: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of one year's successful experience in teaching sewing in schools of such grade or grades as the board of superintendents may determine.

Manual Training Certificates.

For foreman — shop work: Graduation from a high school or evidence of equivalent academic education; one year of trade experience; four years' satisfactory experience in teaching shop work; one year's approved attendance upon a trade school, technical school, or shop teachers' training school, or one additional year of successful experience in teaching shop work or of trade experience.

Manual
Training
Certificates.

This certificate includes certificate designated XI. Special: Instructor — shop work.

For instructor — shop work: Graduation from a high school or evidence of equivalent academic education; one year's satisfactory experience in teaching shop work; one year of trade experience or approved attendance upon a trade school, technical school or shop teachers' training school, or one additional year of successful experience in teaching shop work.

For instructor of manual training and assistant instructor of manual training: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; evidence of one year's successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

Special Class Certificates.

For first assistants in charge, special classes: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; evidence of three years' successful experience in teaching and governing a class of mentally defective children, a satisfactory portion of which must have been in organization and charge of a special class centre.

Special Class
Certificates.

For instructors in special classes: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic

education; evidence of one year's successful experience in teaching a class of mentally defective children; or, evidence of one year's successful experience in a Boston public school as special assistant in a special class; or, evidence of two years' successful experience in teaching regular graded day schools, and successful completion of a course for teachers of mentally defective children, approved by the board of superintendents.

For principal and assistant principal of the Horace Mann School for the Deaf: Evidence of five years' successful experience in teaching and governing schools, at least three years of which shall have been in schools of a similar character. (For assistants in the Horace Mann School for the Deaf, see certificate VIII., Elementary School, Class B.)

Certificates Valid in Evening Schools.

Certificates
Valid in
Evening
Schools.

For certificates in (a) bookkeeping, commercial geography and commercial law, in (b) phonography and typewriting, and in (c) penmanship: Evidence of one year's successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

XII. Evening
High School,
Principal.

XII. *Evening High School, Principal:* To principals of evening high schools.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade; evidence of three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine; evidence of good administrative ability. The foregoing requirement with respect to graduation from a college or university shall not apply to holders of the IV. High School certificate granted upon the completion of seven years of permanent service as instructor or assistant instructor of commercial branches in the Boston public schools.

This certificate includes certificates designated XIII., XIV., XV.

XIII. *Evening High School*: To assistants of evening high schools. XIII. Evening High School.

The requirements for this certificate are: A diploma from a college or university approved by the board of superintendents, or from an institution of as high a grade, and evidence of one year's successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine; or graduation from a high school and three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

This certificate includes certificate designated XV.

XIV. *Evening Elementary School, Principal*: To principals of evening elementary schools. XIV. Evening Elementary School, Principal.

The requirements for this certificate are: Evidence of graduation from a college or from a normal school approved by the board of superintendents; evidence of three years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine; evidence of good administrative ability.

This certificate includes certificate designated XV.

XV. *Evening Elementary School*: To first assistants and assistants of evening elementary schools. XV. Evening Elementary School.

The requirements for this certificate are: Evidence of two years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine.

XVI. *Evening School, Special*: To laboratory assistants of evening high schools. XVI. Evening School, Special.

The requirements for this certificate are: Evidence of one year's successful experience in similar work.

XVII. Evening School, Limited.

XVII. *Evening School, Limited:* To teachers of industrial subjects in evening elementary schools.

The requirements for this certificate are: Evidence of three years' successful experience in the practical pursuit of the industry the candidate is to teach.

XVIII. Evening Elementary School, Interpreter.

XVIII. *Evening Elementary School, Interpreter:* To teachers in interpreting languages in evening elementary schools.

The requirements for this certificate are: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education, and a thorough knowledge of the English language, and of such other language or languages as the candidate is to interpret. Candidates for this certificate shall be at least twenty years of age, and shall have been residents of the United States for at least three years. These certificates shall expire on the thirtieth day of June following the date of issue.

XIX. Evening Drawing School or Evening Industrial School, Principal.

XIX. *Evening Drawing School, or Evening Industrial School, Principal:* To principals of evening drawing schools or of evening industrial schools, and to assistant principals and first assistants in charge of evening industrial schools.

Certificate discontinued, January, 1915.

XX. Evening School Free-hand Drawing.

XX. *Evening School Free-hand Drawing:* To teachers of free-hand drawing in evening schools.

The requirements for this certificate are: Evidence of one year's successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine; or, evidence of three years' satisfactory experience in the practical pursuit of the subject.

XXI. Nurse.

XXI. *Nurse:* To supervising nurse and school nurses.

The requirements for this certificate are: Evidence of graduation from a hospital or similar institution giving a course of instruction in nursing at least two years in length, and completion of a course in public school nursing conducted under the direction of the board of superintendents.

XXII. *Playground:* To supervisors of playgrounds, first assistants in playgrounds, assistants in playgrounds, assistants in sand gardens, and teachers of dramatics and story-telling. XXII. Play-ground.

The requirements for this certificate are: Either completion of a course of instruction in physical training approved by the board of superintendents and evidence of twenty-four weeks' successful experience in charge of a playground; or evidence of thirty weeks' successful experience in charge of a playground.

XXIII. *Evening Industrial School:* To teachers of industrial subjects in evening industrial schools. XXIII. Evening Industrial School.
Certificate discontinued, January, 1915.

XXIV. *Day Industrial School:* To teachers of industrial or related subjects in day industrial schools. XXIV. Day Industrial School.

Certificate discontinued, January, 1915.

XXV. *Temporary:* To teachers temporarily serving in positions of such rank and in such schools as are specified in the certificate. XXV. Temporary.

The requirements for this certificate are: Such as the board of superintendents may determine.

Junior Assistant, Day High School Certificate.

Graduates of colleges or universities who have pursued, subsequent to graduation, a year's course in secondary education approved by the board of superintendents, and holders of the certificate IX. Elementary School, Special, may, by passing the Junior Assistant, Day High School Certificate.

required examinations, be granted a certificate qualifying for service as junior assistant in day high schools.

Upon the completion of two years of satisfactory service under the Junior Assistant, Day High School certificate, candidates may qualify for the certificate IV. High School by passing the prescribed examinations.

XXVI. Con-
tinuation
School.

XXVI. *Continuation School:* To assistants, Continuation Schools; and to teachers of academic subjects in pre-vocational classes; and to heads of division (girls), Continuation School.

The requirements for this certificate are: Graduation from a college or from a normal school approved by the board of superintendents, and evidence of two years' successful experience in teaching and governing schools of such grade or grades as the board of superintendents may determine; and successful completion of a course of training in the theory and practice of continuation schools or of pre-vocational classes approved by the board of superintendents.

XXVII. Day
Clerical
School.

XXVII. *Day Clerical School:* To head instructors in bookkeeping and head instructors in phonography and typewriting of day clerical schools.

The requirements for this certificate are: Such successful experience in teaching commercial or clerical subjects, professional training and other personal qualities as the board of superintendents may determine.

XXVIII. Day
Clerical
School.

XXVIII. *Day Clerical School:* To clerical instructors and clerical assistants of day clerical schools.

The requirements for this certificate are: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; and evidence of three years' successful experience in teaching and governing day

schools of a business character approved by the board of superintendents.

XXIX. *Day Clerical School*: To teachers of English of day clerical schools. XXIX. Day Clerical School.

The requirements for this certificate are: A diploma from a high school approved by the board of superintendents, or from an institution of as high a grade; and evidence of three years' successful experience in teaching and governing day schools of a business character approved by the board of superintendents.

Licenses.

The board of superintendents may issue licenses as teacher assistants and as aids in day clerical schools to persons who present satisfactory evidence of good character and health and who, upon investigation, shall be found to possess the requisite ability to assist in class or individual instruction. Licenses shall expire not later than the thirty-first day of August of the second year following the date of issue, and shall not be extended or renewed.

XXX. *Day and Evening Industrial Schools*: To shop instructors, helpers and trade assistants, in day or evening industrial, continuation, intermediate, or pre-vocational schools or classes. XXX. Day and Evening Industrial Schools.

The requirements for this certificate are: Graduation from an elementary school, or evidence of an equivalent academic education; five years of all-round trade experience as journeyman, one of which shall have been experience in handling apprentices or as foreman; and three years of (one or all) apprenticeship, trade experience, or satisfactory attendance at an approved trade or corporation school.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have satisfactorily completed the state training course, or one year of any approved teachers' train-

ing course, or one year of approved experience in teaching trade processes.

This certificate includes certificate designated XI. Special: Instructor — shop work.

XXXI. A.
Day and
Evening In-
dustrial
Schools.

XXXI. A. *Day and Evening Industrial Schools:*
To heads of departments (shop work) in the Trade School for Girls, and to shop foremen in day or evening industrial, continuation, intermediate, or prevocational schools or classes.

The requirements for this certificate are: Graduation from an elementary school and evidence approved by the board of superintendents of such supplementary education as will enable the candidate to handle shop related subjects ordinarily presented in technical courses in high schools; and five years' successful experience as journeyman, one year of which shall include experience in handling apprentices, or as foreman.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have had two years of (one or both) approved experience in teaching trade processes, or as foreman; and to have satisfactorily completed the state training course or an approved course of training in the theory and practice of the operation of industrial, trade or continuation schools; *provided*, that one year's experience in teaching in industrial, trade or continuation schools, approved by the board of superintendents may be accepted in lieu of the completion of an approved course of training.

This certificate includes certificates designated XI. Special: Foreman — shop work; XI. Special: Instructor — shop work; XXX. Day and Evening Industrial Schools.

XXXI. B.
Day and
Evening In-
dustrial
Schools.

XXXI. B. *Day and Evening Industrial Schools:*
To division heads and shop superintendent in the Boston Trade School, to co-operative instructors and co-ordinators in day high schools, and to division foremen in the Continuation School.

The requirements for this certificate are: Graduation from an elementary school and evidence approved by the board of superintendents of such supplementary education as will enable the candidate to handle shop related subjects ordinarily presented in technical courses one year beyond high school work; and three years' successful experience as journeyman, one of which shall have been in handling apprentices, or as foreman.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have had three years' approved experience in teaching trade processes, or two years' approved experience as foreman, and one year of executive work in industry; and to have satisfactorily completed the state training course or an approved course of training in the theory and practice of the operation of industrial, trade or continuation schools; *provided*, that one year's experience in teaching in industrial, trade or continuation schools, approved by the board of superintendents, may be accepted in lieu of the completion of an approved course of training.

This certificate includes certificates designated XI. Special: Foreman — shop work; XI. Special: Instructor — shop work; XXX. Day and Evening Industrial Schools; XXXI. A. Day and Evening Industrial Schools.

Licenses.

The board of superintendents may issue licenses to serve as aids and student aids in day industrial and continuation schools, and as apprentice helpers in the Boston Trade School to persons who present satisfactory evidence of good character and health, as follows:

(a) To serve as aid in day industrial and continuation schools: To persons who have had three years' satisfactory experience in the practical pursuit of the industry the candidate is to teach, or one year's successful experience in teaching such subject to classes.

(b) To serve as student aid in day industrial schools: To advanced students in said schools.

(c.) To serve as apprentice helper in the Boston Trade School: To persons who have had two years' satisfactory experience in the trade in which the candidate is to serve, or two years' course in a trade or technical school.

Licenses shall expire on the thirty-first day of August of the second year following the date of issue, and shall not be extended or renewed.

XXXII. A.
Day and Even-
ing Industrial
Schools.

XXXII. A. *Day and Evening Industrial Schools:* To (a) instructors in the Boston Trade School, and to vocational assistants in industrial or continuation schools; to (b) instructors — boys' classes in the Continuation School; to (c) heads of departments (academic) in the Trade School for Girls.

The requirements for this certificate are: Graduation from a normal school approved by the board of superintendents, or evidence of an equivalent professional training; and the pursuit of at least two approved educational courses giving acquaintance with the aims, reasons for, and development of industrial education, or one year's experience in business or industry; and three years' successful experience in teaching and governing schools of approved grade, one year of which shall have been in the subject the candidate is to teach.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have satisfactorily completed the state training course or an approved course of training in the theory and practice of the operation of industrial, trade or continuation schools; *provided*, that one year's experience in teaching in industrial, trade or continuation schools approved by the board of superintendents, may be accepted in lieu of the completion of an approved course of training.

XXXII. *B. Day and Evening Industrial Schools:* To vice-principal and to instructors in academic and technical branches in the Boston Trade School, and to heads of division (boys), Continuation School.

XXXII. B.
Day and
Evening In-
dustrial
Schools.

The requirements for this certificate are: Graduation from a college or university approved by the board of superintendents, or evidence of an equivalent professional training; and the pursuit of at least two approved educational courses giving acquaintance with the aims, reasons for and development of industrial education, or one year of actual experience in business or industry; and three years' successful experience in teaching and governing schools of approved grade, one year of which shall have been in the subject the candidate is to teach.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have satisfactorily completed the state training course or an approved course of training in the theory and practice of the operation of industrial, trade or continuation schools; *provided*, that one year's experience in teaching in industrial, trade or continuation schools, approved by the board of superintendents, may be accepted in lieu of the completion of an approved course of training.

This certificate includes certificate designated XXXII. A. Day and Evening Industrial Schools.

NOTE.—Teachers of cookery may meet the three-year experience requirement by the following equivalents:

(a.) One year's experience as cook, with wages from employer other than own family, as the equivalent of one year's trade experience.

(b.) Two years' service as home cook, under carefully established conditions, as the equivalent of one year's trade experience.

(c.) Two years' satisfactory experience as aid in an approved school, as the equivalent of one year's trade experience.

Only one year's credit may be allowed under each of the foregoing items.

XXXIII. In-
termediate.

XXXIII. *Intermediate:* To assistants of day elementary schools in grades VII., VIII. and IX.

The requirements for this certificate are:

Evidence of graduation from a college or from a normal school approved by the board of superintendents; and evidence of three years' successful experience in teaching and governing regular graded day schools.

This certificate includes certificate designated XV.

NOTE.— Holders of certificates of qualification issued prior to January, 1918, which at the time of granting covered service in the upper grades in elementary schools are eligible for appointment to intermediate schools or classes, either by transfer or by appointment.

XXXIV. Day
and Evening
Industrial
Schools,
Physical
Training.

XXXIV. *Day and Evening Industrial Schools, Physical Training:* To teachers of physical training in day and evening industrial schools.

The requirements for this certificate are: A diploma from a high school approved by the board of superintendents, or evidence of an equivalent academic education; satisfactory completion of a course in physical training at least two years in length, or its equivalent, approved by the board of superintendents; and evidence of two additional years of practical experience in corrective medical gymnastics and social welfare work.

Candidates for this certificate, in addition to fulfilling the foregoing requirements, are required to have satisfactorily completed an approved course of training in theory and practice of the operation of industrial, trade and continuation schools; *provided*, that one year's experience in teaching in industrial, trade or continuation schools, approved by the board of superintendents, may be accepted in lieu of the completion of an approved course in training.

Equivalents
for teaching
experience.

SECT. 81. A satisfactory certificate in pedagogy or a diploma from the Boston Normal School, or from a state normal school in Massachusetts,

is accepted as equivalent to one year's successful experience in teaching and governing schools, except when two years' credit is allowed for the IV. High School certificate for work done for the master's degree in education.

2. Certificates issued to directors or heads of departments include certificates issued to assistant directors or other teachers in the same department.

Certificate inclusions of directors.

SECT. 82: 1. Certificates of qualification shall be signed by the superintendent and by the secretary of the board of superintendents, and no certificate shall be signed in blank.

Signatures on certificates.

2. The holder of a certificate is eligible for appointment as a member of the supervising staff, or as a permanent, temporary or substitute teacher in the day, evening or continuation schools, or in playgrounds; *provided*, that the rank to which the appointment is made is included in the certificate which the candidate holds.

Eligibility of holders of certificates.

SECT. 83. 1. The names of persons successfully passing the prescribed examinations and obtaining certificates rendering them eligible to appointment to permanent positions in the day school service shall be arranged by the board of superintendents in suitable, graded eligible lists in the order of their respective qualifications, as ascertained by such examinations.

Eligible lists of examined candidates.

2. The names of graduates of the Boston Normal School shall be arranged by the board of superintendents in suitable, graded eligible lists in the order of their respective qualifications, and shall annually in June be regraded upon such lists. Such graduates may obtain positions upon other eligible lists under the conditions prescribed for other candidates.

Eligible lists of Normal School graduates.

3. The name of no person shall appear upon more than one list of persons eligible for appointment to positions of a given rank; *provided*, that the holder of a high school certificate may, by re-examination, be listed in any group of subjects in which he has passed a major examination.

Names to appear only on one list, except high school certificates.

SECT. 84. 1. The names of persons holding certificates which include certificates of lower

Inclusion of names of lists of lower grades.

grades may, upon request, be included in the eligible list of such lower grade or grades according to the marking of such holders of certificates in their respective examinations, but they shall not be entitled to a higher standing on such lower list or lists by reason of their holding higher grade certificates.

Expiration of
certificates.

SECT. 85. 1. Certificates shall cease to be valid as follows:

Certificates issued on examination after June 1, 1906, shall cease to be valid on the thirtieth day of June of the sixth year following the date of issue; *provided*, that no certificate shall remain valid after the thirtieth day of June next following the fortieth birthday of the holder thereof, except as hereinafter provided, and that this limitation as to age shall not affect the validity of certificates issued prior to January 1, 1909, nor the validity of certificates which do not render the holders eligible for appointment to permanent positions in the day school service, nor the validity of certificates hereafter issued to members of the supervising staff or teachers in permanent day school service.

2. Certificates issued on examination prior to June 1, 1906, ceased to be valid on the thirtieth day of June of the second year following the date of issue, except as hereinafter provided.

3. Certificates issued to graduates of the Boston Normal School prior to June 1, 1906, ceased to be valid June 30, 1912.

4. Certificates issued to graduates of the Boston Normal School after June 1, 1906, shall cease to be valid on the thirtieth day of June of the sixth year following the date of issue, except as hereinafter provided.

5. Certificates issued on examination prior to June 1, 1906, and valid on that date by reason of renewal or of service in the Boston public schools, ceased to be valid June 30, 1908, except that regular high school certificates held by teachers serving during the year ending June 30, 1906, in permanent positions in the day elementary schools, ceased to be valid June 30, 1912, except as hereinafter provided.

6. The validity of certificates issued prior to June 1, 1906, which include positions in day schools of a different class, but which also include the position in which the holder thereof is employed, expired with respect to such day schools of a different class on June 30, 1912; nor shall the validity of any certificate issued after June 1, 1906, extend beyond the thirtieth day of June of the sixth year following the date of issue by reason of the service of the holder thereof in schools of a different class than that in which the holder is employed.

7. Certificates under which appointments are made to permanent positions in the day school service, and certificates of a higher grade, but including the position in which the holder thereof is employed, shall remain valid with respect to the class of schools in which the holder thereof is employed during the term of such service.

8. Certificates, except those under which appointments are made to permanent positions in the day school service, cease to be valid when the names of the holders are permanently removed from the eligible lists.

9. Certificates are non-renewable, and any certificate may be revoked by the board of superintendents if, in its opinion, the good of the service so demands.

Certificates
non-renewable;
may be
revoked.

SECT. 86. 1. Temporary certificates and licenses may be granted by the board of superintendents under such conditions as it may determine, which shall entitle the holders thereof to serve in temporary positions of such rank and in such schools as may be specified.

Temporary
certificates and
licenses.

2. Temporary certificates shall be valid for such length of time as the board of superintendents shall determine, but not beyond the thirtieth day of June of the sixth year following the date of issue. Licenses shall not extend beyond the thirty-first day of August of the second year following the date of issue.

Eligible Lists.

SECT. 87. 1. No person shall, after January 1, 1909, except as hereinafter provided in this section,

Appointments
made from
eligible lists.

be appointed to a permanent position as a member of the supervising staff or as a teacher in the public schools whose name does not head the proper eligible list, and who is willing to accept such appointment; *provided*, that if in the opinion of the superintendent there is good reason why such person should not be appointed, he shall so certify to the Board, whereupon the same procedure shall be followed with respect to the second person on the list, but the person appointed shall be one of the first three on said list willing to accept appointment; nor shall any person be appointed in accordance with the provisions of this section to take effect later than the thirtieth day of June following the fortieth birthday of such person; *provided, however*, that these restrictions shall not affect the promotion of a permanent teacher to a higher rank in a school of the same class as that in which such teacher is already employed; and *provided further*, that the limitation as to age shall not affect the promotion of permanent teachers to any position in the public schools, nor the validity of certificates issued prior to January 1, 1909.

Age limitation.

Removal and restoration of names from and to eligible lists.

2. The names of persons appointed to permanent positions in the day school service shall be removed from the eligible lists. A person whose name appears upon such lists may, upon request, have the same removed therefrom at any time, and may, on written application, have it restored to the next eligible lists in June of any year during the life of the certificate with the same rating as before; or, if a graduate of the Boston Normal School, with such re-rating as the board of superintendents may determine; *provided*, that such restoration shall not affect the validity of the certificate, and shall not operate to extend the original period for which the certificate is valid.

Exemptions from appointment from eligible lists.

3. Appointments as principal of a school, except day elementary, as director, associate director, or assistant director of a special subject or department, as supervisor or assistant supervisor of a special subject or department, as teacher in the Normal School, as instructor of military drill, as medical inspector of special classes, and as super-

vising nurse, shall not be subject to the restrictions of paragraph 1 of this section.

4. The names of persons appointed as substitutes, as temporary teachers, as special assistants in day elementary schools, or as teachers in evening schools, or in playgrounds, shall not be removed from their respective eligible lists because of such appointment.

Names of appointees to temporary positions remain on eligible lists.

SECT. 88. 1. The name of any person appearing upon any eligible list who has failed of selection on three separate occasions when another person on said list has been selected and appointed, shall be dropped from said list by action of the board of superintendents, and shall not be restored thereto except by another examination. The name of any person that has been upon any eligible list six years shall be removed therefrom, and may be restored thereto only by examination. The name of any person appearing on any eligible list who has refused three offers of permanent employment shall, by action of the board of superintendents, be dropped from said list for the remainder of the current school year. Any person taking more than one examination of the same class shall be rated on the eligible list of that class solely upon the results of the latest examination; *provided*, that holders of the certificate of qualification IV. High School, and XXXIII. Intermediate, may, by re-examination, obtain a rating in more than one group under said certificates, and *provided further*, that if a person holding a valid certificate of qualification shall, upon re-examination for a certificate of the same grade, obtain a rating lower than that held at the time of such re-examination, he may, in the discretion of the board of superintendents, retain his original rating and the results of the second examination shall be disregarded.

Removal of names from eligible lists of persons who fail of selection or refuse three offers of employment.

Candidates rated on latest examination.

CHAPTER V.

Duties of Business Agent.

SECTION 90. 1. The business agent shall be the executive officer of the Board in charge of the

Executive financial officer.

accounts, receipt of income, preparation of the pay rolls, purchase, storing, and distribution of supplies, including printing, postage, and the transportation of pupils.

Furnish
bond.

SECT. 91. 1. He shall furnish a bond in the sum of twenty thousand (20,000) dollars for the faithful performance of his duties. The premium on such bond shall be paid by the city.

Keep set of
accounts.

SECT. 92. 1. He shall keep a complete set of accounts of the receipts and expenditures of the Board, which shall at all times be open to the inspection of members of the Board.

Prepare pay
rolls, certify to
expenditures
and make
requisitions.

SECT. 93. 1. He shall prepare all pay rolls and examine all bills of expenditure, certify to their correctness in all respects, and prepare requisitions on the city auditor for the payment of pay rolls and accounts which have been approved by the Board.

Approve and
fill requisitions.

SECT. 94. 1. Requisitions for books, printing, postage, fuel, and materials of every description required for use by any officer or in any school or department shall be subject to his approval. He shall fill such requisitions as he shall approve, within the limits of the appropriations made therefor.

Deliver
supplies.

SECT. 95. 1. He shall cause to be delivered in good order to officers of the Board, to teachers, members of the supervising staff and janitors, upon proper requisitions, such printing, postage, books, fuel, and supplies as may be required and necessary; shall keep an account of the cost thereof and the quantity delivered to each officer, department or school; *provided*, that only such text and supplementary books shall be purchased for use in the schools as shall have been duly authorized by the Board; and only such reference books and educational material as shall have been authorized by the board of superintendents.

Obtain
receipts.

SECT. 96. 1. He shall obtain and keep on file proper receipts for all articles delivered by him.

Oversee
expenditures.

SECT. 97. 1. He shall keep a careful oversight of all expenditures and all costs, and shall call the

attention of the Board to any expense which may seem to him unnecessary, wasteful, or in excess of proper requirements; and whenever the amount for any item in the annual appropriation order shall have been wholly expended, shall immediately report that fact to the Board.

SECT. 98. 1. He shall submit to the Board a monthly comparative statement of appropriations, expenditures, and unexpended balances to date, and for the corresponding period in the previous year, arranged under the following headings: Salaries of instructors, salaries of officers, salaries of janitors, fuel, light, supplies and incidentals, and such other items as appear in the annual appropriation order. He shall include in these reports such recommendations tending to a more economical expenditure of appropriations as he may deem expedient.

Make monthly comparative statements of appropriations and expenditures.

SECT. 99. 1. He shall annually prepare and submit to the Board at the beginning of each financial year or as soon thereafter as may be practicable, detailed estimates showing the probable cost of the maintenance of the school system for the current financial year based on the conditions existing as of December 1 preceding.

Submit estimates of probable cost of maintenance of school system.

2. He shall annually prepare and submit to the Board at the last regular meeting in February or as soon thereafter as may be practicable, an itemized appropriation order prepared under the instructions of the Board, to cover the expenses of the school system for the current financial year with the detailed estimates of the probable cost of the several items.

Submit annual appropriation order.

SECT. 100. 1. He shall keep a separate account of expenditures under the various items included in the annual appropriation order, and shall classify and record all expenditures of the Board in such manner as to make the cost of various departments and units of the school system and items of its administration readily ascertainable and available for comparison.

Keep itemized accounts of expenditures.

SECT. 101. 1. He shall consider and report upon any proposition relating to an extension of or

Report on contemplated expenditures.

change in the school system involving additional expense, or a contemplated expenditure for which provision has not been made in the annual appropriation order, before final action thereon shall be taken.

Obtain statement of leaves of absence granted.

SECT. 102. 1. He shall, before approving the payment of the salary of a teacher, or member of the supervising staff, or other person who is absent on leave granted by the superintendent, obtain from the superintendent a written statement that such leave has been granted.

Collect tuition for non-resident pupils.

SECT. 103. 1. He shall make out bills for the tuition of non-resident pupils in the schools, receipt for amounts received from such source, and pay the same over to the city collector, taking his receipt therefor, or transfer the bills to the city collector for collection.

Method of making purchases.

SECT. 104. 1. Except as hereinafter provided, he shall make all purchases by written orders which shall be in triplicate. The original order shall be transmitted to and become the property of the party to whom the order is issued. The duplicate shall be retained for the purpose of checking the bill when rendered. The triplicate shall be sent to the supply room for use in checking the receipt of supplies and receipting therefor. Orders shall be numbered consecutively. The business agent may, in his discretion, delegate to teachers or members of the supervising staff such part of his authority to make purchases as he may deem expedient. Such delegated authority shall be exercised under the direction of the business agent and he shall be responsible therefor.

Certify to purchases and prices.

SECT. 105. 1. He shall attach to every bill for supplies or materials furnished under his direction, a certificate that such supplies or materials have been actually purchased and delivered under an order issued by him of a certain number and date in accordance with a contract, agreement, or accepted estimate; and if there is no written contract, agreement, or estimate, that the prices charged are reasonable and not in excess of current or market rates.

SECT. 106. 1. He shall annually, or from time to time, unless the chairman of the Board shall otherwise direct, advertise in the *City Record*, published in the city of Boston, for proposals to furnish any article or articles, except text, reference and supplementary books, the estimated cost of which shall be in excess of five hundred (500) dollars. Advertise for proposals.

SECT. 107. 1. He shall, if possible, obtain competitive bids for furnishing any article or articles, the estimated cost of which shall be in excess of one hundred (100) dollars. Obtain competitive bids.

SECT. 108. 1. He shall retain on file in his office, and open to inspection by members of the Board, all proposals received by him, until such proposals shall be submitted to the Board or be required by the city auditor. File proposals.

SECT. 109. 1. He shall receipt for amounts received by him from the sale of books or from other sources, and pay the same over to the city collector, taking his receipt therefor. Receipt for income received.

SECT. 110. 1. He shall, annually in the month of March, submit to the Board a detailed report of the appropriations, income and expenditures of the Board for the year ending January 31 next preceding, with such suggestions relating thereto as he may deem expedient. This report shall contain a statement of the cost of books, fuel, and other materials furnished and charged to the various officers, schools, and departments, the disposition of the same, and an inventory of the stock then on hand. Make annual report.

SECT. 111. 1. The books and accounts of the business agent shall be audited quarterly by certified public accountants selected by the Board. Auditing of accounts.

SECT. 112. 1. He may appoint a chief accountant and such assistants as shall be necessary, subject to the approval of the Board. Appoint assistants.

2. He may delegate to the chief accountant such part of his authority as he may deem expedient, which shall be exercised under the direction of the business agent who shall be responsible therefor. Delegated authority.

CHAPTER VI.

Duties of Schoolhouse Custodian.

General duties.

SECTION 115. 1. The schoolhouse custodian shall be the executive officer of the Board in all matters relating to the care and custody of land and buildings used for school purposes, except the school committee building.

Authority over janitors and matrons.

2. He shall exercise general supervision and control over the janitors and their assistants, and matrons employed in the several school buildings, except the school committee building; see that the rules and regulations for their government are enforced, and report to the Board, in writing, cases of negligence or inefficiency on the part of such employees.

Appoint, transfer and remove janitors and matrons.

SECT. 116. 1. He shall, subject to the approval of the Board, appoint, transfer and remove janitors and matrons, and may make temporary appointments of such employees for a period not exceeding ten days, which shall be reported to the Board.

Suspend janitors and matrons.

SECT. 117. 1. He may reprimand or suspend, with or without pay, for a period not exceeding fifteen days, any janitor or matron, and shall immediately report such action to the Board in writing, with the reasons therefor.

Inspect buildings and instruct janitors and matrons.

SECT. 118. 1. He shall visit and inspect the school buildings from time to time, and as frequently as circumstances shall permit, and shall advise and instruct janitors and matrons in the performance of their duties.

Countersign requisitions.

SECT. 119. 1. He shall countersign requisitions for fuel and janitors' supplies required for use in the several schools.

Office hours.

SECT. 120. 1. He shall be in his office at least one hour each week day, which hour shall be regular.

Keep duplicate keys of buildings.

SECT. 121. 1. He shall keep in his office duplicate keys of school buildings and of the rooms therein.

Keep records.

SECT. 122. 1. He shall keep full and complete records of the business of his office, which shall be open to the inspection of the members of the Board.

SECT. 123. 1. He may appoint such assistants as shall be necessary, subject to the approval of the Board. Appoint assistants.

CHAPTER VII.

Duties of Board of Apportionment.

SECTION 125. 1. The board of apportionment shall consist of the superintendent, two assistant superintendents assigned by the superintendent, and the business agent. Membership.

2. The superintendent shall be chairman *ex officio*, and when present shall preside at meetings of said board. Chairman.

3. A quorum of the board of apportionment shall consist of three members. Quorum.

4. The secretary of the Board shall be secretary of the board of apportionment, shall keep its records and have the custody of its files and documents. Secretary.

5. Meetings of the board of apportionment shall be held at the call of the chairman. Meetings.

SECT. 126. 1. The board of apportionment shall prepare and submit to the Board at the beginning of each financial year or as soon thereafter as may be practicable, a statement showing the cost of all proposed additions to and extensions and expansions of the school system, including additional teachers or other expenses necessary to meet the estimated growth of the system, which statement shall also include any reductions or economies which may be deemed desirable. Submit statement of cost of proposed additions to, extensions and expansions of, school system.

SECT. 127. 1. The board of apportionment shall prepare and submit to the Board at the beginning of each financial year or as soon thereafter as may be practicable, a list of additional school accommodations, both permanent and temporary, including lands, buildings, yards, and furnishings which it may deem necessary. Submit list of lands, buildings, yards, and furnishings deemed necessary.

SECT. 128. 1. The board of apportionment shall have general control of the appropriations made by the Board for supplies and incidentals, and may make such transfers as it may deem expedient within such appropriations. Control of appropriations.

Apportion
incomes of
Bowdoin,
Degrand and
Gibson Funds.

SECT. 129. 1. The board of apportionment shall annually apportion the income of the Bowdoin, Degrand and Gibson Funds among the schools entitled to share therein.

Approval of
requisitions.

SECT. 130. 1. The board of apportionment shall approve requisitions made by principals of schools or districts, or by directors or heads of departments, for supplies and other materials not commonly furnished in accordance with the provisions of the regulations.

Monthly
statements of
business agent.

SECT. 131. 1. The business agent shall present a monthly statement to each member of the board of apportionment, showing the balance available for each school or district under the appropriation for supplies and incidentals.

Business agent
to report excess
expenditures.

SECT. 132. 1. The business agent shall inform the board of apportionment whenever the expenditures under any item shall have equalled or exceeded the amount allowed therefor.

CHAPTER VIII.

Duties of Trial Board for Janitors.

Membership.

SECTION 135. 1. The trial board for janitors shall consist of the secretary, the business agent and a school janitor.

Quorum.

2. A quorum of the trial board for janitors shall consist of two members.

Election of
janitor
member.

3. The school janitor member of the trial board for janitors shall be annually elected during the month of June by the school janitors, in a manner to be devised by the other two members of said board, and shall serve for a term of one year beginning with the first day of September in the year of his election.

Vacancy.

4. Whenever a vacancy occurs in the janitor membership of said board, it shall be filled in the manner aforesaid for the unexpired portion of the term.

Duties of
board.

SECT. 136. 1. The trial board for janitors shall consider charges and complaints preferred against any janitor or matron which may be referred to it by

the Board, and shall report its findings and recommendations to the Board.

2. The decisions of the trial board for janitors as to questions of fact shall be conclusive, but an appeal from its recommendations may be made to the Board. Decisions of board and appeal.

3. The trial board for janitors may require the attendance before it of any person in the employ of the Board. Attendance of witnesses.

CHAPTER IX.

Duties of Salary Board.

SECTION 140. 1. The salary board shall consist of the superintendent, the business agent and the secretary. Membership.

2. A quorum of the salary board shall consist of two members. Quorum.

SECT. 141. 1. The salary board shall annually consider the salaries of all persons employed under various titles in the administrative offices of the Board, and shall recommend to the Board such changes in said salaries as the salary board shall deem expedient, which shall take effect on the first day of January, or at such later date as the salary board may recommend, and shall continue for a period of one year, and thereafter until further action by the Board on the recommendation of the salary board. Such salaries having once been established for an ensuing year shall not be changed during that year. Duties of Board.

SECT. 142. 1. Assistants employed in the administrative offices of the Board shall begin service at a minimum salary of six hundred ninety-six (696) dollars per annum, which shall continue until the first day of January next following the beginning of their employment, and thereafter until otherwise determined by the Board on the recommendation of the salary board; *provided*, that persons who may be so appointed by transfer from any state or municipal department may be employed at an initial salary not exceeding that received by them at the time of transfer. Salaries of assistants, administrative offices.

REGULATIONS.

CHAPTER X.

Terms, Holidays and Vacations; Sessions; Special Days and Exercises.

School year.

SECTION 150. 1. The school year shall begin on the first day of September in each calendar year and close on the last day of August of the following calendar year.

Term.

SECT. 151. 1. The term of all day schools shall begin on the second * Wednesday in September, and shall continue up to and including the Wednesday of the second calendar week immediately preceding the Fourth of July. Teachers and members of the supervising staff, except those whose vacations are otherwise established by the regulations, shall report for duty at 9 o'clock A. M. on the Tuesday preceding the second Wednesday in September, and shall continue on duty except on such days as the sessions of the schools are suspended, or unless leave of absence is granted in accordance with the regulations, up to the close of the regular morning session on Wednesday of the second calendar week immediately preceding the Fourth of July. The collection of text books and supplies at the end of the term shall not be begun earlier than the Monday of the last week of the term. Principals may require the attendance of teachers on the Thursday and Friday of the last week following the close of the schools for assistance at graduations or for the completion of records and reports.

Attendance of teachers and collection of books.

Summer term, day industrial schools.

2. In addition to the regular term, the day industrial schools shall be in session for a summer term from the fifth day of July up to and including the last Friday in August. When the fifth day of July falls upon Saturday or Sunday, the schools

* In September, 1919, term begins Monday, September 8, under order of November 4, 1918.

shall begin upon the following Monday. When the fourth day of July falls upon Sunday, the schools shall begin the following Tuesday.

3. In addition to the regular term, sessions for the Day School for Immigrants may be held on such hours on Saturdays as the superintendent may determine; *provided*, that there is a request for such sessions on the part of a sufficient number of non-English speaking persons.

Term of
day school for
immigrants.

4. The term of the summer review schools shall begin on the Monday immediately following the close of the day schools in June of each year, and shall continue for forty consecutive calendar days, Sundays and legal holidays excepted.

Term of
summer review
schools.

5. The term of the evening schools shall begin on the last Monday in September and shall continue through the week immediately preceding the April vacation.

Term of
evening
schools.

6. The term of the playgrounds, their days and hours of session, shall be determined annually by the Board.

Term of
playgrounds.

Holidays and Vacations.

SECT. 152. 1. The sessions of the day schools shall be suspended on Saturdays, Sundays, and the following-named holidays and vacations: the Twelfth of October; from 12 o'clock noon on the day before Thanksgiving Day until the following Monday; from 12 o'clock noon on the second calendar day immediately preceding Christmas to and including the first day of the following January; the week in which the Twenty-second of February falls; Good Friday; the week in which the Nineteenth of April falls; Memorial Day; and the Seventeenth of June. Whenever any of the aforesaid holidays falls upon Sunday, the schools shall not be in session on the following Monday.

Holidays and
vacations,
day schools.

2. The sessions of the evening schools shall be suspended on the Twelfth of October; Thanksgiving Day; the day preceding and the day following Thanksgiving Day; from the second Friday preceding Christmas to and including the first day of the following January, but when the first day of

Holidays and
vacations,
evening schools.

January of any year shall fall later than Tuesday of any week, the sessions shall be suspended on the remaining days of that week; the week of the Twenty-second of February, and on any other legal holidays which may occur during the term.

Suspension of sessions by chairman.

SECT. 153. 1. The chairman of the Board may suspend the sessions of the day schools, not exceeding six sessions in each calendar year; each such suspension to be reported to the Board at the meeting immediately following.

Suspension of sessions by superintendent.

2. The superintendent may suspend a session or sessions of any school or schools for important reasons peculiar thereto; each such suspension to be reported to the Board at the meeting immediately following. He may dismiss any day school or schools for two half-days in each term, for conferences or meetings to be held by him with teachers. He may dismiss any day school or schools, or member of the supervising staff, for not more than two days in each term, for the purpose of allowing visitation of other schools.

Visitation.

Suspension of sessions for annual prize drills.

3. The superintendent may suspend the session of the Public Latin and of any day high school at his discretion on days on which the annual prize drills take place.

Suspension of sessions for annual parade.

4. The sessions of the Latin and of day high schools shall be suspended on the day of the annual parade.

Suspension of sessions on stormy days.

5. The superintendent may, on account of stormy weather, suspend the morning sessions of day elementary schools by causing the proper signal to be given at 7.45 o'clock A. M., and the afternoon sessions of day elementary schools by causing the proper signal to be given at 11.45 o'clock A. M.

Suspension of sessions by Board.

6. Except as provided in this section, no school session shall be suspended except by order of the Board.

Holidays and vacations, teachers and members of the supervising staff.

SECT. 154. 1. Teachers and members of the supervising staff, except as otherwise provided in this section, shall be entitled to the holidays and vacations specified in section 152, paragraph 1, of the regulations.

2. Teachers employed in day industrial schools shall be allowed the holidays and vacations specified in section 152, paragraph 1, of the regulations, and in addition thereto not more than eight weeks in each calendar year, to be taken at such time or times as the principal of the school shall determine.

Holidays and vacations, teachers, day industrial schools.

3. The vacations of certain members of the supervising staff and other employees shall be as follows:

Holidays and vacations, supervising staff.

Director of physical training: Holidays and vacations specified in section 152, paragraph 1, of the regulations, and in addition thereto not more than eight weeks in each calendar year, to be taken at such time or times as the superintendent shall determine.

Holidays and vacations, director of physical training.

Supervising nurse: Legal holidays; the regular Christmas vacation; the regular spring vacation; and as many weeks, but not less than four during the months of July and August, at such time or times as the director of medical inspection shall determine.

Holidays and vacations, supervising nurse.

School nurses: Legal holidays; the regular Christmas vacation; the regular spring vacation; and as many weeks, but not less than four during the months of July and August, at such time or times as the supervising nurse, with the approval of the director of medical inspection, shall determine.

Holidays and vacations, school nurses.

School physician assigned to certificating office: Legal holidays; and as many weeks, but not more than four during the months of July and August, at such time or times as the director of medical inspection shall determine.

Holidays and vacations, school physician assigned to certificating office.

Armorer: Holidays and vacations specified in section 152, paragraph 1, of the regulations.

Holidays and vacations, armorer.

Sessions.

SECT. 155. 1. The sessions of morning kindergartens shall begin at 9 o'clock and close at 12 o'clock. The sessions of afternoon kindergartens shall conform to the hours of the respective elementary schools in which they are located, and shall

Sessions of kindergartens.

begin not earlier than 1.30 o'clock and close not later than 4 o'clock.

Sessions of day
elementary
schools.

SECT. 156. 1. The morning sessions of the day elementary schools shall begin at 9 o'clock and close at 12 o'clock; *provided*, that when such occupancy does not entail additional demands upon the heating plant, shop work classes may begin at 8 o'clock. The afternoon sessions of these schools shall begin at 1.30 or 1.45 o'clock and shall be two hours in length.

Attendance of
pupils before
sessions.

2. Pupils in the day elementary schools may be required to be present and in their seats not more than ten minutes prior to the time of beginning of the morning sessions, and not more than five minutes prior to the time of beginning of the afternoon sessions.

Sessions, pre-
vocational
classes.

3. The sessions of the pre-vocational centers shall be six hours in length and shall begin not earlier than 8.30 o'clock A. M., and close not later than 4 o'clock P. M.

Sessions,
classes for
conservation of
eyesight.

4. The sessions of the classes for conservation of eyesight shall be five hours in length and shall begin not earlier than 9 o'clock A. M., and close not later than 4 o'clock P. M.

Sessions,
speech im-
provement
classes.

5. The sessions of the speech improvement classes shall begin not earlier than 9 o'clock A. M., and shall close not later than 4 o'clock P. M.; *provided*, that no pupil shall be required to attend such classes more than two hours daily.

Sessions,
Horace Mann
School.

6. The sessions of the Horace Mann School for the Deaf shall begin at 9 o'clock A. M., and close at 4 o'clock P. M., with such recesses and intermissions as the superintendent may direct.

Sessions,
Day School
for
Immigrants.

7. The sessions of the day school for immigrants shall begin not earlier than 8.30 o'clock A. M., and close not later than 9.30 o'clock P. M.; *provided*, that no evening sessions may be held without specific direction of the superintendent in the case of each class.

Sessions,
day industrial
schools for
boys.

8. The sessions of day industrial schools for boys shall begin at 8.30 o'clock A. M., and close at 4 o'clock P. M., with a noon intermission of one-half hour.

9. The sessions of day industrial schools for girls shall begin not earlier than 8.30 o'clock A. M., and close not later than 9.30 o'clock P. M., with such recesses and intermissions as the superintendent may direct; *provided*, that no pupil shall be required to attend school more than seven and one-half hours daily, exclusive of recesses and intermissions of one hour or more in length.

Sessions of
day industrial
schools for
girls.

10. The sessions of the Normal, Latin and day high schools shall begin not earlier than 8.20 o'clock A. M., and close not later than 4 o'clock P. M.; *provided*, that no session shall be less than five and one-half hours in length including the recess period.

Sessions of
Normal, Latin
and day high
schools.

11. The sessions of the Boston Clerical School shall begin at 9 o'clock A. M., and close at 2.30 o'clock P. M., with an intermission of one-half hour.

Sessions of
Boston Clerical
School.

12. The sessions of the summer review elementary schools shall begin at 8.30 o'clock A. M., and close at 11.30 o'clock A. M. The sessions of the summer review high school shall begin at 8 o'clock A. M. and close at 12 o'clock M.

Sessions of
summer review
schools.

13. The sessions of the evening schools shall begin not earlier than 7.15 o'clock P. M., nor later than 7.30 o'clock P. M., be two hours in length, and close not later than 9.30 o'clock P. M., on not less than three evenings in the week, Mondays to Fridays, inclusive, as determined by the superintendent.

Sessions of
evening schools.

SECT. 157. 1. In the day elementary schools there shall be a recess of twenty minutes when one-half of the morning session has expired; *provided*, that such recess may be omitted for classes engaged in cookery, sewing or shop work.

Recesses, day
elementary
schools.

2. In the first three grades of the day elementary schools there shall be a recess of twenty minutes when one-half of the afternoon session has expired.

3. In the pre-vocational centers there shall be a recess of twenty minutes when one-half of the morning session has expired, except that said recess may be omitted in centers where shop work is given daily.

Recesses,
pre-vocational
centers.

4. In the Normal, Latin and day high schools one-half hour of the daily session shall be devoted to recess.

Recesses,
Normal,
Latin and
day high
schools.

Time included
in intermissions
and recesses.

5. The time occupied by pupils in passing from and re-entering buildings shall be included in the noon intermission and recess periods.

Recesses,
inclement
weather.

6. Pupils shall not be obliged to take an open-air recess in inclement weather, but must pass out of the class-room in order that it may be thoroughly aired.

Admission to
buildings on
stormy days.

SECT. 158. 1. Upon cold or stormy days throughout the year, pupils shall be admitted to the school houses one-half hour before the beginning of each session.

Opening of
class-rooms and
attendance of
teachers.

SECT. 159. 1. School-rooms shall be open and the teachers present therein fifteen minutes before the beginning of each session; *provided*, that in schools having a noon intermission of but one hour, teachers shall have their class-rooms open and be present therein five minutes before the beginning of the afternoon session.

Special Days and Exercises.

Reading of
Bible.

SECT. 160. 1. The morning exercises in the day schools shall begin with the reading by the teacher of a portion of Scripture without note or comment. No other religious exercises shall be allowed in the schools.

Patriotic
exercises.

SECT. 161. 1. Patriotic exercises shall be held in the day schools during the last sessions preceding the Twenty-second of February, the Thirtieth of May and the Twelfth of October, and on the Twelfth of February, unless that day falls on a Saturday or Sunday, in which case the exercises shall be held during the last session preceding.

Health Day.

2. The first Friday in October shall be observed as Health Day, and the superintendent shall arrange such a program for that day as he may deem expedient for the purpose of presenting in a special manner the value and importance of conserving health.

Visitation Day.

3. There may be an annual visitation day in the day schools during the month of May, which shall be specified by the superintendent.

SECT. 162. 1. The graduating exercises of the day elementary schools shall be held on Friday of the second calendar week immediately preceding the Fourth of July, at such hour as may be determined by the respective principals.

Graduating exercises, day elementary schools.

2. The graduating exercises of the Normal, Latin and day high schools shall be held on Thursday of the second calendar week immediately preceding the Fourth of July, at such hour as may be determined by the respective principals.

Graduating exercises, Normal, Latin and day high schools.

3. Appropriate graduating exercises may be held at the close of the term of the several evening schools, at such times as may be approved by the director of evening schools.

Graduating exercises, evening schools.

SECT. 163. 1. No exercises in which dancing is participated in by pupils attending the day or evening schools shall be conducted in the evening under the auspices of any school or under the name of any school, or of any school organization composed wholly or in part of school pupils; *provided*, that this restriction shall not apply to such annual graduating exercises of schools as may be held in the evening, or to such exercises of the evening schools as may be held on the last session preceding Christmas.

Dancing

CHAPTER XI.

Pupils: Admission, Attendance, Registration, Care of Health, Discipline.

SECTION 170. 1. Children four years of age and upwards permanently residing in the city are entitled to free tuition in the schools, subject to the requirements of the rules and regulations of the Board.

Children entitled to free tuition.

2. Neither a non-resident child, nor one who has only a temporary residence in the city, shall be allowed to remain in any school, except by authority of the business agent; *provided*, that principals may temporarily admit pupils whose legal right to attend school may be in question, pending the decision of the business agent, for a period not exceeding ten school days.

Non-resident pupils.

Evidence of
age required.

SECT. 171. 1. Pupils admitted to the day schools for the first time must present a birth certificate, a baptismal record, official governmental passport containing proof of age, or evidence satisfactory to the principal that none of these is obtainable. Pupils who fail to present the evidence of age herein required, may be admitted and continued in the schools pending the securing of such evidence.

Notification
to parents
of age
requirements.

2. In order to facilitate the registration of pupils at the beginning of the fall term, each teacher in the day elementary schools shall, in June of each year, ascertain which pupils in her class have relatives who intend to enter the schools the following September, and through such pupils shall notify parents of the requirements of the preceding paragraph.

SECT. 172. 1. Age and other requirements for admission to the day elementary schools (see also section 195 with respect to vaccination) shall be as follows:

Admissions
to kinder-
gartens.

2. Children four years of age and upward may be admitted in the order of application to those kindergartens which are most convenient for them to attend, and in which there are sufficient accommodations; *provided*, that principals of districts may, with the approval of the assistant superintendent in charge, decline to admit children to kindergartens when the number in attendance exceeds fifty. A record shall be kept of all applicants thus refused.

Admissions
to day
elementary
schools.

3. No child who shall be less than five and one-half years of age on September 1 in any year shall be admitted to the first or higher grade during that school year, except with the permission of the assistant superintendent in charge, or after the completion of a full year in a kindergarten; and no child under seven years of age shall be admitted to the first grade after November 1 in any school year, except with the approval of the assistant superintendent in charge.

Admissions
within district
lines except

4. Pupils shall be admitted in the order of application to the day elementary schools within

the district in which they reside, and in which there are sufficient accommodations and suitable classes; *provided*, that children attending the first three grades may be admitted to those schools which it is most convenient for them to attend, and in which there are sufficient accommodations, without regard to school district boundaries.

in first three grades.

5. Principals of day elementary school districts may, with the approval of the assistant superintendent in charge, establish such boundary lines regulating the admission of pupils to buildings within the same district as the proper school organization of the district may make desirable, and may transfer pupils from one building to another within the same district as may from time to time be necessary.

Establishment of boundary lines within districts.

6. Pupils above the third grade shall not be admitted to or continued in the schools of a day elementary school district within the boundary lines of which they do not reside, except upon the application of parents or guardians, and the approval, in writing, of the assistant superintendent of each school district affected; *provided*, that pupils who have completed the sixth grade may, on the request of their parents or guardians, be permitted to remain in the schools of the district they are then attending until the completion of the eighth grade, notwithstanding any change in residence within the city limits.

Admissions of pupils outside of districts.

SECT. 173. 1. Pupils may be admitted to any pre-vocational center in which there are sufficient accommodations and suitable classes without regard to school district boundary lines.

Admissions to pre-vocational centers.

2. Boys shall be admitted to pre-vocational centers on probation by the principals in charge. They shall be regularly admitted to and discharged from such centers on the recommendation of the first assistant director of manual arts.

Admission of boys to pre-vocational centers.

SECT. 174. 1. Certificates of transfer in duplicate, including the physical record of the child, shall be issued in case of pupils removing from one day school or district to another, one of which shall be given to the pupil and the other to the

Transfer of pupils from one district to another.

attendance officer. Pupils regularly discharged from one school, or class, or district shall be admitted to the same class or grade of any other school.

Transfer cards for pupils discharged from day elementary schools.

2. Whenever any pupil is discharged from a day elementary school because of change of residence the teacher shall issue a transfer card which shall be signed by the principal of the district, giving, if possible, the street and number of the new residence of such child, and without delay shall place such card in the attendance officer's box. Transfer cards brought by an attendance officer to a principal shall be investigated promptly and marked "in school" or "not in school" and returned to the attendance officer.

Admission of pupils to classes in cookery, sewing and shop work.

SECT. 175. 1. Pupils twelve years of age and upward may be admitted to day classes in cookery, sewing and shop work, with the approval of the assistant superintendent in charge.

Classes for special groups of children.

SECT. 176. 1. Classes for special groups of children may be established from time to time in day elementary school districts on the recommendation of the superintendent, and with the approval of the Board, for a period not extending beyond the close of the school year in which any such classes may be authorized, as follows: Classes for the conservation of eyesight; hospital classes; modern language classes; open-air classes; pre-vocational classes; rapid advancement classes; special classes; special English classes; speech improvement classes; ungraded classes.

Classes for conservation of eyesight.

2. Pupils may be admitted to classes for the conservation of eyesight by the director of medical inspection.

Open-air classes.

3. Open-air classes shall, in general, be composed of pupils of not more than two different grades; *provided*, that with the approval of the assistant superintendent in charge, in districts where, in the opinion of the director of medical inspection it is advisable, each such class may be composed of pupils of not more than three different grades.

4. Pupils shall be regularly admitted to open-air

classes and transferred therefrom to regular classes of corresponding grades by the principals of the respective districts; both admission and transfer being subject to the approval of the director of medical inspection.

5. Pupils shall be admitted to rapid advancement classes by the principal of the district, with the approval of the assistant superintendent in charge of such classes.

Rapid
advancement
classes.

6. Pupils shall be admitted to speech improvement classes on probation by the teachers thereof. Pupils shall be regularly admitted to such classes on the recommendation of the director of medical inspection, and may be discharged therefrom by the teacher in charge, subject to the approval of the director of medical inspection.

Speech
improvement
classes.

7. Pupils shall be admitted to special classes on probation by the teachers thereof. Pupils shall be regularly admitted to such classes on the recommendation of the medical inspector of such classes, and discharged therefrom on the recommendation of the director of special classes; both subject to the approval of the director of medical inspection.

Special
classes.

8. Pupils shall be admitted to special English classes by the principal of the district, subject to the approval of the assistant superintendent in charge of such classes.

Special
English
classes.

9. Pupils over eight years of age may be placed in ungraded classes by the principal of the district, subject to the approval of the assistant superintendent in charge of such classes.

Ungraded
classes.

10. The Boston Disciplinary Day School is established in accordance with chapter 738 of the Acts of 1914 as a school for pupils who are not amenable to ordinary school discipline. Pupils shall be admitted to and discharged from this school under the direction of the assistant superintendent in charge of the school. In so far as is consistent with the special disciplinary requirements of the school, it shall be conducted in accordance with the regulations for day elementary schools.

Boston
Disciplinary
Day School.

SECT. 177. 1. Candidates for admission to the Day School for Immigrants shall consist of adults,

Admissions to
Day School
for Immigrants.

of minors not less than sixteen years of age, and in day elementary school districts in which no special English classes are established, of minors under sixteen years of age; *provided*, that no person who is not a resident of Boston shall be admitted to said school until he has shown to the teacher in charge a receipt from the business agent for tuition charges.

Admissions
to Horace
Mann School.

SECT. 178. 1. Pupils over five years of age shall be admitted to the Horace Mann School for the Deaf in accordance with the provisions of the Revised Laws, chapter 39, section 19, viz.:

The governor may, upon the request of the parents or guardians and with the approval of the board (State Board of Education) send such deaf persons as he considers proper subjects for education, for a term not exceeding ten years, but, upon like request and with like approval, he may continue for a longer term the instruction of meritorious pupils recommended by the principal or other chief officer of the school of which they are members . . . to the Horace Mann School at Boston. . . .

No distinction shall be made on account of the wealth or poverty of such children or their parents. No such pupil shall be withdrawn from such institutions or schools except with the consent of the authorities thereof or of the governor; and the expenses of the instruction and support of such pupils in such institutions or schools, including their necessary travelling expenses, whether daily or otherwise, shall be paid by the Commonwealth; but the parents or guardians of such children may pay the whole or any part of such expense.

Admissions
to Boston
Industrial
School for
Boys and Trade
School for
Girls.

SECT. 179. Any male resident who is over fourteen and under twenty-five years of age may be admitted to the Boston Trade School and any female resident who is over fourteen and under twenty-five years of age may be admitted to the Trade School for Girls, if properly qualified to pursue the work required in said schools. Non-resident pupils may be admitted, if properly qualified, with the approval of the State Board of Education and in accordance with the laws regulating admission to state-aided schools.

Admissions to
Latin and day
high schools;
admission
cards.

SECT. 180. 1. Pupils shall be admitted to Latin and day high schools only upon the presentation of an admission card signed by the superintendent. Admission cards shall be granted by the superintendent to graduates of the day elementary schools; to graduates of private day schools approved by the board of superintendents; to graduates of the

evening elementary schools; to graduates of day elementary schools of cities and towns of Massachusetts approved by the board of superintendents; and to those who have successfully passed examinations authorized or given by the board of superintendents.

2. Pupils who have attended day high schools other than those of Boston, who present evidence of competency satisfactory to the respective principals and approved by the board of superintendents, may be granted admission cards signed by the superintendent, and be admitted to such standing in Latin and day high schools as their qualifications may warrant.

3. Pupils who have been promoted to the seventh or a higher grade of the day elementary schools and who present evidence of scholarship satisfactory to the board of superintendents, may be granted admission cards by the superintendent, and assigned to the classes in the Latin schools which they are qualified to enter. Applicants for admission to the Latin schools must present a signed statement from their parents or guardians of intention to give them a collegiate education.

SECT. 181. 1. Examinations of candidates for admission to Latin and day high schools shall be held annually by the board of superintendents as follows: Latin schools, on the first Friday in June and on the Tuesday preceding the second Wednesday in September. Day high schools, on the Friday immediately following the second Wednesday in September.

Examinations
for admission
to Latin and
day high
schools.

SECT. 182. 1. Pupils attending Latin and day high schools who desire to be transferred from one school to another may be so transferred with the written approval of the assistant superintendent in charge of each school affected.

Transfers
of pupils, Latin
and day high
schools.

SECT. 183. 1. Candidates for admission to the Boston Clerical School shall consist of girls who have completed two years of high school work, and who desire to pursue a course of study for office service; girls who have completed three years of high school work, and who desire to pursue a course in stenog-

Admissions
to Boston
Clerical
School.

raphy and higher clerical work; young women graduates of high schools who desire to pursue a course in business accounting; and young women graduates of high schools who wish to pursue a secretarial course.

Admissions to
Normal School.

SECT. 184. 1. Young women who have completed the Normal School preparatory course in a Boston day high school, or an equivalent course of study, with diploma, who are of good moral character, good health, and with no physical characteristics likely to interfere with their success as teachers, are eligible for admission to the examinations of candidates which are held by the board of superintendents on the second Friday and preceding Thursday in June of each year.

2. Men and women graduates of a university or college approved by the board of superintendents, and women graduates of a three-year course in a state normal school so approved, may be admitted to the school, subject to such examination as the board of superintendents may determine, and, if they prove to be qualified, may be admitted to the senior class.

3. Pupils are admitted to the Boston Normal School at the beginning of the school year and at no other time.

4. Pupils are admitted to the Boston Normal School on probation, and if, in the opinion of the board of superintendents, they prove to be unsatisfactory, may be dismissed from the school.

Admissions to
summer review
schools.

SECT. 185. 1. Candidates for admission to the summer review schools shall consist of pupils attending day elementary and day high schools who have failed of promotion in one or two subjects; pupils attending day elementary schools above the third grade who have failed of promotion for two consecutive years, and pupils attending special English classes.

2. Pupils shall not be admitted to summer review schools after the first Tuesday of the term.

3. Pupils shall be admitted to the summer review schools only on the written application of the principals of the schools they respectively attend,

their teacher, their parent or guardian, or on the approval of the assistant superintendent in charge.

4. Pupils absent from the summer review schools without a reasonable excuse for two consecutive days, and pupils absent for any reason for a total of four days during the term, thereby sever their connection with the school.

Discharge of pupils, account of absence.

SECT. 186. 1. Candidates for admission to the evening schools shall consist of adults and of minors not less than sixteen years of age who do not attend the day schools. Pupils over fourteen years of age who attend day or continuation schools may be admitted under such conditions as the superintendent may prescribe.

Admissions to evening schools.

2. Pupils sixteen years of age and over may be admitted without examination to evening elementary schools.

3. Pupils sixteen years of age and over may be admitted without examination to the evening industrial schools; *provided*, they are able to profit by the instruction offered in the studies which they select. In general, it is to be understood that in order to profit by the instruction offered in a given course the pupil must be so employed as to have opportunity to practise a calling the same as, or closely allied to, the one which he elects to study in the school.

4. No pupil shall attend an evening high school who is not a graduate of a Boston day or evening elementary school, or a school of equal or higher rank, or who has not passed a satisfactory examination in such subjects as the board of superintendents may prescribe.

SECT. 187. 1. No pupil shall be considered as enrolled in any evening school until he shall have attended at least one class session thereof.

Enrollment of pupils, evening schools.

2. Any pupil who shall absent himself from an evening school for three consecutive evenings on which his attendance is due, shall be discharged therefrom and shall not be reinstated unless the absence shall have been satisfactorily explained to the principal.

Discharge of pupils, account absence.

Advance Payments, Evening Schools.

Advance
payments,
evening
schools.

SECT. 188. 1. Each applicant for admission to an evening school who is not bound by law to attend such school, shall, when he applies for admission, make an advance payment to the principal of the school, which payment shall be for the whole or unexpired portion of the current school term, at the following rates: Evening high schools, one dollar (\$1); evening industrial or trade schools, one dollar (\$1); evening elementary schools, fifty cents (\$0.50).

Receipts.

2. Each applicant shall be given a receipt for such advance payment on the form provided for the purpose.

Refund of
advance
payments.

3. Each pupil shall be refunded the full amount of his advance payment during the last week of the evening school term; *provided*, first, that said pupil has been in attendance on at least two-thirds of the full number of sessions held during the term, or at least three-fourths of the full number of sessions held after January first — but in case of personal illness, certified to by a physician, this requirement may be waived at the discretion of the principal; second, that said pupil's conduct has been satisfactory to the principal; third, that said pupil has made proper use of the school equipment and supplies, and has returned all books or other material loaned to him. Each pupil who enrolls in a short unit course shall be refunded the full amount of his advance payment at the time the course for which he has registered has been completed to the satisfaction of the principal; *provided*, first, that said pupil has been in attendance on at least three-fourths of the full number of sessions held between the date of his registration and the date on which said course was completed; second, that said pupil's conduct has been satisfactory to the principal; third, that said pupil has made proper use of the school equipment and supplies, and has returned all books or other material loaned to him.

4. The advance payment shall be forfeited: first, in case personal application is not made with the prescribed voucher for the return of said advance payment during the last week of the evening school term; second, in case the pupil fails to comply with all the provisions of the preceding paragraph; third, in case the pupil's attendance at school is prevented by change of residence; fourth, in case a pupil in a Boston day school is attending evening school without the necessary permit.

Forfeit of
advance pay-
ments.

5. In case an applicant who is examined for admission to an evening high school fails to qualify the advance payment shall be refunded.

Refund of
advance
payments.

6. The advance payment may be waived or refunded at the discretion of the director of evening schools on written recommendation of the principal of the school concerned.

Advance pay-
ments waived
or refunded.

7. All advance payments received by principals shall be regularly remitted by them to the business agent each week in such form as he may require; *provided*, that each principal of an evening high school may retain in his possession a sum not exceeding twenty dollars (\$20); each principal of an evening elementary school may retain in his possession a sum not exceeding ten dollars (\$10); and each principal of an evening industrial school may retain in his possession a sum not exceeding fifty dollars (\$50) of such advance payments for the purpose of making refunds to pupils as hereinbefore provided.

Advance pay-
ments waived
to business
agent.

8. In the event of refunds to pupils reducing the total amount of advance payments made by any principal below the amount named in the preceding paragraph of this section, he may obtain from the business agent, with the approval of the director of evening schools, a sum sufficient to restore such balance to the amount he is allowed to retain under the provisions of the preceding paragraph.

Advance pay-
ment balances
in hands of
principals.

9. During the last week of the evening school term, each principal may obtain from the business

Advance pay-
ments refunded
to principals.

agent, with the approval of the director of evening schools, the refund of such portion of the advance payments previously transmitted by him to the business agent as shall be required to remit to pupils the advance payments to which they are entitled under the regulations.

Deposit of
advance
payments by
business agent.

10. All advance payments received by the business agent shall be deposited by him in a national bank or trust company as a separate fund, and any interest accruing thereon and any unexpended balance remaining at the close of the evening school term, shall be accounted for by him in the same manner as income from other sources.

Attendance and School Records.

Absence of
pupils for
other instruc-
tion.

SECTION 189. 1. No pupil shall be absent a part of any session for the purpose of receiving instruction elsewhere; *provided*, that this regulation in so far as it relates to day high schools may be suspended in individual cases by the assistant superintendent in charge.

Pupils leaving
before close of
session.

2. No pupil shall leave before the close of a school session without the consent of the teacher in charge.

Pupils
counted as
present.

3. A pupil who is not present during at least half of a session shall be marked and counted as absent for that session; *provided*, that pupils absent, tardy or dismissed with the approval of the principal of the school district because of their required presence at a hospital clinic shall be counted as present.

Dismissal
of day
elementary
pupils not
absent or
tardy.

SECT. 190. 1. Pupils in the day elementary schools who have not been absent or tardy during any month may, in the discretion of the principal of the district, be dismissed thirty minutes before the regular closing time at the last session in that month.

Abbreviations
or diminutives
of given names
forbidden.

SECT. 191. 1. In all official records and documents containing the names of teachers or pupils, no abbreviations or diminutives shall be used, but such names shall be expressed with at least one of the given names in full.

SECT. 192. 1. Such school records shall be kept as the superintendent shall prescribe, and teachers in charge thereof shall keep the same correctly and make such returns therefrom as may be required. School records.

2. The address of each pupil attending the day elementary schools shall be verified bi-monthly. Verification of pupils' addresses.

3. School records shall be open only to the inspection of the Board, its officers, and the attendance officers. Inspection of school records.

4. Except as provided in the preceding paragraph, teachers are under no obligation to show their school records to anyone except judges of the courts of the Commonwealth and officers appointed by judges to take testimony. Teachers are under the same obligation to appear in court and testify and bring with them their own records, as are other witnesses. Appearance in court.

5. Lists of pupils shall not be given to any person not a member or officer of the Board. The provisions of this paragraph shall not be construed to prohibit the publication of the catalogues of the Public Latin and the English High schools in the usual form. Lists of pupils.

6. The fact that a pupil's absence is constrained by statute, or by the board of health, or by a physician, or in any imperative way, does not warrant failure to record the absence of such pupil. Record of absent pupils.

SECT. 193. 1. The regular monthly reports of attendance shall be furnished on or before the fifth day of the month following that covered by any report. Monthly reports of attendance.

2. The annual statistical reports and other data required by the superintendent at the end of the school year shall be furnished promptly, and principals shall remain on duty until these reports or data have been received and approved by the superintendent. Annual statistical reports.

SECT. 194. 1. In reckoning the average membership and the percentage of attendance in the day schools, no pupil's name shall be omitted in counting the number of pupils belonging to the Basis for reckoning membership and attendance.

school and the number of absences of such pupil until it is known that such pupil has withdrawn from the school without intention of returning, or, in the absence of such knowledge, after investigation by the attendance officer, until ten consecutive days of absence have been recorded; *provided*, that pupils absent from school for more than ten consecutive school days, who still live in the district and who intend to return to school, shall be temporarily discharged.

Care of Health of Pupils.

Certificates of
vaccination.

SECT. 195. 1. A child who has not been vaccinated shall not be admitted to a public school except upon presentation of a certificate signed by a registered physician, designated by the parent or guardian, stating that the physician has at the time of giving the certificate personally examined the child and is of the opinion that the physical condition of the child is such that his health will be endangered by vaccination. Such certificate once issued does not create an exemption from vaccination for all time, and a new certificate may be required from time to time in order to continue such exemption.

Records of
vaccination.

2. A record shall be made with respect to each child, preferably upon the "A. D. P."* card, that satisfactory evidence of vaccination or a certificate of unfitness for vaccination has been presented; in the latter case the name and address of the physician by whom such certificate is signed and the date thereof shall be made a matter of school record.

Communicable
diseases.

SECT. 196. A teacher, pupil, janitor or matron with signs or symptoms of smallpox, scarlet fever, measles, German measles, chicken pox, pulmonary tuberculosis, diphtheria, influenza, tonsilitis, whooping cough, syphilis, gonorrhœa, mumps, scabies, pediculosis, trachoma, cerebro-spinal meningitis, anterior poliomyelitis, or any other communicable disease or condition, shall be excluded from school,

* Admission, Discharge and Promotion Card, day elementary schools.

including evening and summer review schools and playgrounds, during such illness until the principal of the school or the teacher in charge of the playground has been furnished with a certificate from the Health Department, its authorized agent, the attending physician, or the school physician, stating that danger of contagion has passed. Exclusion on account of pediculosis shall mean exclusion until the condition is remedied.

2. A teacher, pupil, janitor or matron, who is a member of a household in which a person is ill with a communicable disease, or a teacher or pupil known to be otherwise exposed to a communicable disease, shall not attend any public school, including evening and summer review schools and playgrounds, until the principal of the school or the teacher in charge of the playground has been furnished with a certificate from the Health Department, its authorized agent, the attending physician, or the school physician, stating that danger of contagion has passed.

Exclusion
because of
communicable
diseases.

3. A member of a household in which a person is ill with a communicable disease or a teacher or pupil known to be otherwise exposed to a communicable disease may be excluded, readmitted, or allowed to remain in school in accordance with the following rules:

(a.) *Scarlet Fever*: No exclusion if the person exposed has had the disease; otherwise the minimum period of exclusion shall be one week.

(b.) *Diphtheria*: No exclusion if the person exposed has been immunized and can furnish a certificate (acceptable to the school physician) of two consecutive negative cultures obtained at an interval of forty-eight hours; otherwise the minimum period of exclusion shall be one week.

(c.) *Smallpox*: No exclusion if the person exposed has had the disease or shows evidence of successful vaccination within five years; otherwise the minimum period of exclusion shall be two weeks.

(d.) *Typhoid Fever, Measles, Whooping Cough, Anterior Poliomyelitis*: No exclusion if the person

exposed has had the disease; otherwise the minimum period of exclusion shall be two weeks.

(e.) *Cerebro-Spinal Meningitis*: No exclusion if the person exposed has had the disease; otherwise the minimum period of exclusion shall be one week.

(f.) *Chicken Pox, Mumps, German Measles*: No exclusion if the person exposed has had the disease; otherwise the minimum period of exclusion shall be three weeks.

(g.) The periods of exclusion for all communicable diseases not definitely specified shall be such as the school physician may decide in each case after consultation with the principal of the school.

Previous attacks of disease.

4. Evidence of a previous attack of the communicable diseases mentioned in the preceding paragraph must be satisfactory to the school physician.

Definition of "household."

5. The word "household" used in connection with the regulations relating to communicable diseases shall mean family.

Exclusion because of communicable diseases.

SECT. 197. 1. If a principal or teacher has reason to believe that a teacher, pupil, janitor or matron is absent on account of sickness of a communicable nature; that there is a suspicion that a communicable disease exists in the household of any pupil or teacher attending school; that a teacher or pupil attending school has visited a household wherein a communicable disease existed at the time of said visit, such teacher or pupil shall be excluded from school, including evening and summer review schools and playgrounds, until the conditions are investigated by the school physician.

Return to school.

2. A teacher, pupil, janitor or matron returning to school or to playground after an attack of a communicable disease or from a household in which there has been exposure to contagion shall be readmitted only on recommendation of the school physician.

Pupils not to be sent on errands.

SECT. 198. 1. Pupils shall not be sent to the homes of absent pupils suspected of having communicable diseases, nor on personal errands for teachers.

SECT. 199. 1. Each pupil shall be seated in accordance with his physical requirements only, and not according to rank in scholarship or in conduct, or in both. Requisitions for adjustable furniture shall be made by principals upon the schoolhouse commission, through the director of medical inspection, which furniture shall be altered as frequently as may be necessary to meet the requirements of pupils using the same.

Seating of pupils.

Adjustable furniture.

SECT. 200. 1. Teachers in day elementary and day intermediate schools shall so arrange their daily exercises in their classes that each pupil shall have, each forenoon and afternoon, regular exercise from the course of study in physical education. These exercises shall be given between 10 o'clock A. M., and 10.10 o'clock A. M., and for a ten-minute period in the afternoon, beginning fifty minutes after the afternoon session opens. The time designated for regular physical exercises shall be in addition to the time devoted in each session to recess. Windows shall be opened, top and bottom, for a sufficient portion of each period allotted to physical exercises to ensure the thorough flushing of each room with outside air.

Daily physical exercises.

2. Principals of Latin and day high schools shall so arrange their exercises in the various classes that each pupil shall have daily a ten-minute setting-up drill, which shall be held between the second and third periods. Windows shall be opened, top and bottom, for a sufficient portion of each period allotted to the setting-up drill to ensure the thorough flushing of each room with fresh air.

Setting-up drill.

3. Periods allotted in each session for physical training in day elementary and day intermediate schools and for setting-up drill in day high schools, shall be announced by a bell signal for the whole school.

Signals for physical training exercises.

4. Teachers shall at all times require that pupils maintain the correct sitting and standing posture.

Posture of pupils.

SECT. 201. 1. Teachers shall at all times give vigilant attention to the ventilation and temperature of their class room to the end that the air may

Ventilation and temperature of class rooms.

be kept pure and the temperature maintained as near sixty degrees Fahrenheit to sixty-seven degrees Fahrenheit, inclusive, as possible

2. Teachers shall thoroughly air each class room and dressing room by opening the windows, top and bottom, a sufficient portion of each recess period and of the period allotted to physical exercises, so as to ensure the flushing of each room with fresh air from outside the building.

3. Teachers shall thoroughly air each class room and dressing room by opening the windows, top and bottom, at the close of the forenoon session for a period of not less than three nor more than five minutes during the time the pupils are filing. Teachers shall see that their windows are closed before they leave the building at noon. Windows may be left open in mild weather.

4. Any failure of adjustment of the heating and ventilating apparatus which makes it impossible to maintain a room temperature of sixty degrees Fahrenheit to sixty-seven degrees Fahrenheit, with the windows open, or with windows closed where the plenum system is in use, shall be reported at once by the teacher to the principal or teacher in charge, and the principal shall report it immediately to the director of medical inspection. The provisions of this section do not apply to rooms or places occupied by open-air classes.

5. In buildings where the plenum system is in use and when temperature outside the building is above sixty-three degrees Fahrenheit, upon signal from the janitor that the apparatus for ventilating the rooms is not working, teachers shall ventilate their rooms by opening windows.

6. In buildings where the plenum system is in use the opening of windows shall be governed by the outside conditions and with regard for the influence on other parts of the building.

7. A record of the room temperature shall be taken at 9.30 A. M., 11 A. M. and 2.15 P. M., in day elementary schools; in Normal, Latin and day high schools at 9.30 A. M., 11 A. M., and 1.30 P.M.

8. Principals shall see that the buildings in their charge are properly heated and ventilated throughout each session, giving due regard to the system installed for the ventilation of each building. In all cases, when the temperature reaches 67 degrees Fahrenheit the rooms must be thoroughly flushed with fresh air. Pupils may be permitted to wear an outer garment in the class room if necessary to meet the requirements of this regulation.

9. Principals shall report immediately to the director of medical inspection any failure of the heating or ventilating system to thoroughly flush each room with pure air from outside the building and to maintain a room temperature of 60 degrees Fahrenheit to 67 degrees Fahrenheit with the windows open, or with windows closed where the plenum system is in use.

10. Principals shall see that the conditions prescribed by the director of medical inspection for the conduct of open-air classes are carried out.

11. Janitors are not permitted to regulate windows in rooms occupied for class purposes during school hours. Any complaint on the part of teachers with respect to the amount of heat furnished, or of janitors with respect to the opening of windows, shall be made to the principal or teacher in charge of the building, for adjustment.

Discipline.

SECT. 202. 1. Every pupil must come to school cleanly in his person and dress, and with his clothes in proper repair. Person and dress of pupils.

SECT. 203. 1. Tardiness, unless satisfactorily explained, shall be subject to a proper penalty. Pupils detained from day schools or tardy shall present an excuse in writing from their parents or guardians, but shall not be sent home to obtain such excuse. Tardiness of pupils.

SECT. 204. 1. The confinement of pupils in a closet or wardrobe, and the use on the part of a teacher of sarcastic or discourteous language, is forbidden. Punishment of pupils.

Physical
restraint in
kindergartens
forbidden.
Corporal
punishment.

2. No physical restraint of any kind shall be used in a kindergarten.

3. Corporal punishment shall be restricted to boys in day elementary and disciplinary schools; shall be confined to blows on the hand with a rattan and in the presence of a competent witness; and shall not be inflicted in sight of other pupils. It shall be resorted to only in extreme cases and after the nature of the offence has been fully explained to the offending pupil. Violent shaking or other gross indignities are expressly forbidden.

Reports of
corporal
punishment.

4. Cases of corporal punishment shall be reported by each teacher daily, in writing, to the principal of the district, which reports shall state the name of the pupil, the name of the witness, the amount of the punishment, and the reason for its infliction. These reports, together with those of cases of corporal punishment inflicted by the principals, shall be kept on file by the principals for two years, at the expiration of which time they shall be destroyed. These reports shall be open to inspection only by the superintendent, the assistant superintendents, and members of the Board.

5. The number of cases of corporal punishment, by whomsoever inflicted, shall be reported by the respective principals monthly, in writing, to the superintendent.

Detention
of pupils.
after school.

SECT. 205. 1. No pupil shall be detained for study or punishment during the noon intermission or a recess period. Any pupil may be detained at the close of the afternoon session in day elementary schools and in day industrial schools for a period not exceeding thirty minutes for purposes of discipline, or, with the approval of the assistant superintendent in charge, for a period not exceeding one hour to make up imperfect lessons, but such detention shall be only on account of the pupil's fault or neglect.

Return of Latin
and day high
school pupils
for study.

2. Pupils in Latin and day high schools whose scholarship is unsatisfactory may be required to return to school after the close of the regular session for a study period not exceeding two hours daily.

SECT. 206. 1. Pupils attending any day school may be suspended by the principal thereof for violent or pointed opposition to authority in any particular instance, or when the example of the pupil is injurious or subversive of discipline. In such cases the principal shall forthwith request the attendance of the parent or guardian of such suspended pupil at his office for the purpose of consultation and adjustment, and if he is unable to make a satisfactory adjustment of the matter within three days of the suspension of the pupil, he shall refer the case to the assistant superintendent in charge, and shall so notify the pupil and the parent or guardian, such notice to include the office hours of the assistant superintendent. If such pupil shall give satisfactory evidence of amendment, the assistant superintendent may reinstate him in the school. If the pupil is not so reinstated within two weeks of the date of his original suspension, the case shall be reported by the assistant superintendent to the superintendent for further action; *provided*, that no pupil shall be permanently excluded from school except by order of the Board; and *provided further*, that in the operation of this regulation, no pupil shall be deprived of educational advantages contemplated under the state law.

Suspension
and exclusion
of day school
pupils.

2. A pupil in a Latin or day high school who fails to sustain a satisfactory standard of scholarship, or of conduct, may be placed on probation by the principal, with the approval of the assistant superintendent in charge, and if at the end of two months such pupil has not shown reasonable improvement he may, on the recommendation of the principal, approved by the board of superintendents, be required to withdraw finally from the school; and *provided further*, that in the operation of this regulation, no pupil shall be deprived of educational advantages contemplated under the state law.

Probation
and with-
drawal of Latin
or day high
school pupils.

3. Pupils may be suspended by principals of evening schools for disobedience or improper conduct, and such pupils shall not be readmitted without the consent of the director of evening schools.

Suspension
of evening
school pupils.

Readmission
of pupils
suspended
or expelled.

SECT. 207. 1. A pupil who has been expelled from or is under suspension in any school shall not be admitted to another school, except by order of the Board or of the superintendent.

Wilful deface-
ment of city
property.

2. A pupil who shall in any manner wilfully deface or otherwise injure any portion of a school estate, or write any profane or indecent language, or make any obscene pictures or characters on school premises, shall be liable to suspension, expulsion or other punishment according to the nature of the offence.

Replacement
of city
property.

3. A pupil who defaces, loses, or destroys any book, apparatus, or other property belonging to the city, may be required to replace the same, or make good the cost of such replacement.

CHAPTER XII.

Duties of Teachers, Members of the Supervising Staff, Clerical Assistants, Bookkeepers, etc.

Observance
of regulations.

SECTION 215. 1. Teachers and members of the supervising staff are required to make themselves familiar with the regulations of the Board, especially with such as relate to their individual duties, and to observe them faithfully.

Rules and
regulations to
be made
accessible.

SECT. 216. 1. Principals and directors shall see that each of their subordinates is furnished with a copy of the rules and regulations; and principals shall see that a copy thereof is kept conveniently accessible in each school building, in which shall be entered promptly such amendments to said rules and regulations as the Board may adopt.

Minutes of
Board, official
notice.

SECT. 217. 1. Teachers and members of the supervising staff shall regard the minutes of the Board as official notice of its action in any matter, and shall be governed accordingly. Principals, directors and others to whom copies of the minutes are regularly sent shall notify their subordinates promptly of anything appearing in the minutes in which such subordinates are concerned. Failure to receive copies of the minutes of any meeting of the Board shall not excuse principals and directors

from observing any instructions contained therein, unless application shall have been made to the secretary of the Board for copies of such proceedings, and such application neglected.

SECT. 218. 1. Teachers and members of the supervising staff shall promptly respond to any request for reports or information received from the Board, its officers, or the board of superintendents.

Furnish required information.

SECT. 219. 1. Principals of schools and districts and directors of departments are the responsible administrative heads of their respective schools, districts or departments, and are charged with the organization thereof and with the supervision and direction of their subordinates and pupils, and with the general maintenance of order and discipline. They shall see that the rules and regulations of the Board, the directions of its officers, and the established courses of study are observed; and they may establish and enforce such regulations not contrary to the general rules and regulations, orders of the Board and instructions of the superintendent or of the assistant superintendent in charge, as may, in their opinion, be advisable for the successful conduct of their schools, districts, or departments. They may require their subordinates to keep such records and to make such reports as they deem necessary.

Responsible administrative heads of schools and departments.

2. They shall be responsible for reporting cases of truancy or suspected truancy to the attendance officers assigned to their respective schools or districts for investigation; and the principals and the attendance officers shall together judge whether or not the pupil is to be considered a truant.

Report cases of truancy, and determine whether or not pupils are truants.

SECT. 220. 1. Principals and directors shall keep, or cause to be kept, such records and make such reports as the superintendent shall prescribe.

Records and reports.

2. Whenever a principal proposes to absent himself from his main building, he shall notify a master, submaster, master's assistant, or first assistant, grammar school, who shall assume charge thereof until his return.

Principals to notify subordinate of proposed absence.

Reports to
business agent
of appoint-
ments, trans-
fers, removals,
deaths, etc.

3. Principals and directors shall notify the business agent within one week after the appointment of any subordinate teacher or member of the supervising staff in their respective schools, districts, or departments, of the name of such subordinate, with the date of beginning of service; and shall also notify the business agent immediately, and in writing, of the transfer, resignation, removal or death of any subordinate teacher or member of the supervising staff, with the date thereof; also of the marriage of any woman teacher or member of the supervising staff, with the date thereof. They shall also notify the superintendent promptly, in writing, of the resignation, removal or death of any subordinate teacher or member of the supervising staff, with the date thereof; also of the marriage of any woman teacher or member of the supervising staff, with the date thereof.

Certification
to business
agent of
services
rendered.

4. Principals and directors shall certify to the business agent, in accordance with his requirements, with respect to the services of any person employed in their respective schools, districts or departments.

Certification
of services
of temporary
teachers.

5. Principals of day schools and directors, shall certify to the department of practice and training to the services of all substitutes, special assistants and temporary teachers assigned by said department to their schools, districts, or departments in such form and on such dates as may be required.

Reports to
superintendent
of absence of
subordinates.

6. Principals and directors shall promptly notify the superintendent of the absence of any subordinate teacher or member of the supervising staff in their respective schools, districts or departments.

Applications
for services
teachers.

7. Principals of day schools shall immediately notify the department of practice and training of the need of substitutes, special assistants or temporary teachers, whose services may be required in their respective schools or districts.

Reports to
business agent
of non-resident
pupils.

SECT. 221. 1. Principals of day schools shall at the beginning of each term, report to the business agent the names of non-resident pupils, with the names and addresses of the parents or guardians of such pupils, and shall not permit such pupils to

remain in the schools under their charge for a period exceeding ten school days except by authority of the business agent.

2. They shall report on the first of October and on the first of February in each year to the assistant superintendent in charge, the names of pupils attending their schools but residing in other districts, except those in the first three grades, or in prevocational centres. These reports shall give the address of each pupil by street and number, the school district in which he resides, his grade, and the date on which the permission to transfer expires.

Reports of
pupils residing
in other
districts.

SECT. 222. 1. All complaints from parents, guardians or others shall be referred to the principal in charge of the school or district, who shall patiently hear and impartially investigate the same, using his best endeavors to redress any real grievances, and referring such as he cannot satisfactorily adjust to the assistant superintendent in charge.

Complaints of
parents or
guardians.

SECT. 223. 1. Principals shall give such instructions to their subordinates as will prepare them to act promptly and prudently in case of fire; and shall so train their pupils that at a given signal they will leave the school building speedily and in order. They shall establish a fire-alarm signal and drill, and shall require the same to be practised at irregular and unexpected times at least once each month during the school year in all buildings. Each such drill shall be timed by the principal or teacher in charge of a school building, and a report thereof made to the superintendent each month.

Precautions
against fire.

2. The first duty of a principal, janitor, or teacher finding that a building is on fire is to give the fire-alarm signal on the school bells, which is four strokes repeated,— 4-4.

Fire alarm.

3. In school buildings equipped with a fire-alarm system, the fire signal on the school gongs is given by breaking the glass in the door of the nearest signal station, pulling the lever way down and letting go. In the majority of buildings, the pulling down of the lever in the signal station also auxiliarizes the nearest

Ringling in
alarms.

fire department box and sends in an alarm to fire department headquarters. In buildings where the local fire-alarm system is not connected with the fire department box, the principal shall designate the janitor or some other person to ring in the nearest fire department box in case of actual fire as soon as the same shall be discovered.

Fire drill.

4. In cases when only a fire drill is wanted and the fire department is not to be called, the signal station door should be opened without breaking the glass, the lever pulled way down and let go. The door should then be closed and locked immediately.

Teachers and janitors to get pupils out of building.

5. The janitor and each teacher in the building shall then repair immediately to their respective stations, as designated by the principal, and assist in getting the pupils out of the building as rapidly as possible and in accordance with the plan established by each principal for his respective buildings.

Enforcement of regulations for janitors and matrons.

SECT. 224. 1. Principals or teachers in charge of buildings shall see that the rules and regulations for the government of janitors and matrons, their assistants and other employees, are enforced; and principals shall immediately notify the schoolhouse custodian, in writing, of any neglect of duty or improper conduct on the part of janitors or their assistants, and matrons.

Rules for yards and outbuildings.

2. Principals shall prescribe such rules for the use of yards and outbuildings as shall ensure their being kept in neat and proper condition; shall examine such premises frequently; and shall be held responsible for any want of cleanliness or unsanitary condition not reported to the proper person, officer, or department.

Doors to be kept unlocked.

3. Principals or teachers in charge of buildings shall see that the doors to class and dressing rooms are kept unlocked during school hours, and that all corridors, stairways, or other means of egress are kept free from obstructions and in readiness for immediate use. They shall also see that the outside doors of buildings are kept locked from without and open from within during school hours.

4. Principals shall notify the superintendent, in writing, of unsatisfactory performance of duty on the part of attendance officers assigned to their respective districts.

Reports of unsatisfactory attendance officers.

SECT. 225. 1. Principals or teachers in charge of buildings shall be responsible for, and keep full and complete records of, all books, globes, maps, charts, apparatus, and other articles furnished to their respective schools, and the disposition thereof, and make returns thereon in such manner as shall be prescribed by the Board or business agent.

Responsibility for school property.

2. Principals shall keep full and complete records of all gifts, such as pictures, casts, apparatus, etc., made to their several schools, and shall permit no works of art, such as paintings, engravings, photographs, casts, etc., to be displayed in any school building under their charge, unless the same shall have been approved by the director of manual arts, and in the case of paintings, mural decorations, original statues, bas-reliefs, sculptures, and memorial tablets, by the art commission also.

Records and acceptance of gifts.

SECT. 226. 1. A sub-master in charge or a master's assistant in charge shall be the recognized official head of the school to which he or she is assigned, subject to the supervision and direction of the principal of the district.

Duties of sub-masters in charge and masters' assistants in charge.

2. A sub-master in charge or a master's assistant in charge shall have charge of a class and shall teach at least half the time, and shall discharge such administrative duties relating to the school, to parents' associations, to conferences with parents, and to questions of discipline as may be assigned by the principal of the district.

3. Sub-masters, masters' assistants, first assistants, grammar, and first assistants in charge shall, in addition to teaching, discharge administrative functions in their respective schools.

Duties of sub-masters, masters' assistants, first assistants, grammar, and first assistants in charge.

4. Principals shall, with the approval of the assistant superintendent in charge, assign such administrative functions to sub-masters, masters' assistants, first assistants, grammar, and first assistants in charge, as they deem necessary for the effective administration of their schools.

Principals to assign administrative functions to sub-masters, masters' assistants, first assistants, grammar, and first assistants in charge.

General duties
of teachers.

SECT. 227. 1. Teachers shall punctually observe the hours appointed for opening and dismissing the schools, and shall faithfully devote themselves to their duties. They shall co-operate with their principals in the management of pupils before and after school sessions, at recess, and during noon intermissions. They must be at the station to which they have been assigned in halls, yards, and on stairways or elsewhere at the times specified by the principals for such duty, and must not loiter in halls or corridors nor visit one another's rooms while on duty. In all intercourse with their pupils they shall strive to impress on their minds, both by precept and example, the principles of morality, truth, justice and patriotism, and endeavor to train their pupils to a true comprehension of the rights, duties and dignities of American citizenship, and encourage the avoidance of falsehood, idleness and profanity.

Tardiness of
teachers.

2. When any teacher has been tardy four times in the same school year, the principal shall immediately state the fact in writing to the superintendent, with the reasons therefor.

Sale of articles,
award of prizes
and acceptance
of presents.

SECT. 228. 1. No teacher shall sell or keep for sale any books, stationery, or other articles required for use in the schools, award diplomas or prizes to pupils, or solicit any present from them; *provided*, that this restriction shall not prevent the sale at cost of articles or of food made or prepared by pupils in special classes, or by pupils in sewing, cookery or manual training in their pursuance of a course of study in such subjects, in accordance with such methods as may be approved by the superintendent and by the business agent.

Contributions
from pupils.

2. Soliciting or encouraging contributions from pupils for any purpose is prohibited, except with the formal approval of the board of superintendents in each specific case.

Participation
in voting
contests.

3. No teacher or member of the supervising staff shall participate in any newspaper, magazine, or other contest, the prizes in which are to be awarded on the basis of the number of votes received by any contestant.

4. No teacher or member of the supervising staff shall sell or encourage the sale to pupils of tickets to any amusement or entertainment not officially sanctioned by the Board, or conducted under school auspices in school buildings.

Sale of tickets.
to entertain-
ments.

5. No teacher or member of the supervising staff shall keep a private school, or edit any newspaper or any religious or political periodical; nor shall they teach private pupils on school days until the expiration of one hour after the regular closing hour of the school in which the teacher is employed, or in the case of members of the supervising staff, earlier than five o'clock P. M. on a school day.

Editing of
newspapers or
periodicals;
teaching of
private pupils.

SECT. 229. 1. Teachers of kindergartens shall regularly devote their afternoons to visiting in the families of their respective districts; shall hold meetings for parents once each month from October to May for the purpose of securing their interest and co-operation in the aims of the kindergarten; shall attend such conferences and lectures as may be arranged by the director of kindergartens; and shall give such assistance in classes of the first three grades as the superintendent may direct.

Duties of
kindergarten
teachers.

SECT. 230. 1. Directors of departments shall regularly prepare, subject to the approval of the superintendent, graded outlines for instruction in their respective subjects in accordance with the prescribed course of study, and shall furnish the same to the teachers concerned.

Graded out-
lines of instruc-
tion.

2. They shall prepare each year, before the first school day in September, schedules showing the proposed visits of assistant directors and assistants to the schools, which they shall submit to the superintendent for approval. These schedules may include meetings of teachers, and shall be so prepared as to avoid conflict with visits from the representatives of other departments, and unnecessary interference with other school work.

Schedules
of school
visits.

3. They shall transmit copies of these schedules to the members and officers of the Board, principals of schools and districts, sub-masters in charge, masters' assistants in charge, and to first assistants

Transmissal
of schedules
of visits.

in charge. These schedules may be changed with the approval of the superintendent.

Conferences.

4. They shall hold conferences with their assistants at least once a month, and shall keep a record book in which the proceedings of such conferences shall be regularly recorded, and which shall be kept in the office of the superintendent and open to inspection of members of the Board.

Duties of assistant directors.

SECT. 231. 1. Assistant directors and assistants to directors shall give instruction in the schools to which they may be assigned by the heads of their respective departments, with the approval of the superintendent.

Notification to teachers in charge.

2. They shall, upon arriving at a school, in pursuance of their duties, immediately notify the principal or teacher in charge thereof.

Deviations from schedules.

3. They shall, in case of deviation from their schedules, notify in advance the principal or teacher in charge of the school affected thereby.

Records of school visits.

4. They shall keep a record of the time of their arrival at and departure from each school visited by them, and in case of absence or deviation from their schedule, shall report to the head of their department who shall keep a record thereof and notify the superintendent.

Duties of director of evening schools.

SECT. 232. 1. The director of evening schools shall have general supervision and control over such schools.

Duties of director of extended use of public schools.

SECT. 233. 1. The director of the extended use of the public schools shall have general supervision and control over such social, civic and recreational activities as are organized and conducted in connection with the extended use of the public schools.

Duties of director of household science and arts.

SECT. 234. 1. The director of household science and arts shall have general supervision and control over household science and arts, including cookery and sewing in the day schools, except industrial schools.

Duties of director of kindergartens.

SECT. 235. 1. The director of kindergartens shall have general supervision and control over kindergartens.

SECT. 236. 1. The director and first assistant director of manual arts shall have general supervision and control over the instruction in manual arts in the day schools, except industrial schools.

Duties of director and associate director of manual arts.

SECT. 237. 1. The director of music shall have general supervision and control over the instruction in music in the day schools.

SECT. 238. 1. The assistant superintendent in charge of practice and training shall have charge of observation and practice teaching in the schools.

Duties of director of music.

She shall perform such service in assigning, visiting, and assisting substitutes, temporary teachers, special assistants in day elementary schools, and junior assistants in Latin and day high schools, and such other duties as the superintendent may direct.

Duties of director of practice and training.

2. She shall assign Normal School pupils to the day elementary or Latin and day high schools for observation and practice in teaching, for such periods as the course of study in the Normal School requires.

3. She may require from the training teachers and from the principals of schools in which the Normal School pupils observe and practice, reports in writing on the teaching and governing ability of such pupils; and similar reports from principals of Latin and day high schools concerning the work of junior assistants.

SECT. 239. 1. The assistant superintendent in charge of educational investigation and measurement shall conduct standard tests in the schools to the end that definite standards of attainment by pupils in different subjects and grades shall be established for the guidance of teachers. He shall conduct such investigations as the superintendent may direct or approve to promote efficiency of instruction and economy of time and money.

Duties of assistant superintendent in charge of educational investigation and measurement.

SECT. 240. 1. The director of salesmanship shall have general supervision of the instruction in salesmanship in continuation and day high schools, except the High School of Commerce; and shall act as co-ordinator between

Duties of director of salesmanship.

the schools and mercantile establishments in securing practice for the day high school pupils in salesmanship.

General
duties of
director of
medical
inspection.

SECT. 241. 1. The director of medical inspection shall have general supervision and control of all matters affecting the physical welfare of pupils, teachers and members of the supervising staff; of observance of the regulations of the Board with respect to room temperature and humidity, ventilation and sanitation; and of the seating of pupils. He shall have general supervision of the selection of pupils for special classes; for speech improvement classes; for open-air classes; and for classes for the conservation of eyesight. He shall have general supervision and control of medical inspection; of school nursing and allied matters, including the teaching of physiology and hygiene and instruction for the prevention of tuberculosis as required by statute. He shall serve in an advisory capacity on matters relating to military drill. He shall be a member *ex officio* of all committees having to do with plans for school buildings, school lunches, text-books on physiology and hygiene, and other matters affecting the physical welfare of pupils and teachers.

Report to
superintendent
violations of
rules, regula-
tions, etc.; also
prejudicial acts
or practices.

2. He shall report to the superintendent any violation of the rules and regulations or orders of the Board, and any acts or practices in the schools which he believes prejudicial to the physical welfare of pupils, teachers or members of the supervising staff.

Determine
hours of
service to be
rendered by
assistants.

3. He shall determine, subject to the approval of the superintendent, the hours of service to be rendered on school days, on Saturdays, and on holidays by his assistants.

School
physicians
and medical
inspector under
supervision of
director of
medical
inspection.
Report for
service daily;
notify of
inability to
do so.

SECT. 242. 1. School physicians and the medical inspector of special classes shall perform their duties under the general supervision and control of the director of medical inspection.

2. School physicians shall report every school day to the principal or to the teacher designated by the principal of the schools to which they are respectively assigned, and shall visit each school to

which they are assigned by the director of medical inspection. If they are unable to report for duty they shall notify the director of medical inspection promptly by telephone in order that a substitute may be provided. Such notification shall be followed the same day by a written application for leave of absence.

3. They shall begin inspections as near the opening of the morning session as may be practicable and shall keep a record of the time of their arrival at and departure from each school. They shall conduct routine and morning inspections in the manner prescribed by the director of medical inspection.

Time and
conduct of
routine and
morning
inspections.

4. They shall examine all children entering school for the first time.

Examine all
new pupils.

5. They shall make an examination and diagnosis of every child returning to school without a certificate from the Board of Health or from the attending physician, after absence on account of illness or from unknown cause and shall make such examination and diagnosis of every child who shows signs of ill health or symptoms of contagious or infectious disease. They shall separately and carefully examine every child in their respective districts at least once in every school year and shall send a written notice of any defect or disability requiring treatment to the parent or guardian of the children concerned. They shall report to the director of medical inspection the name and school attended by any pupil who refuses to be thus examined.

Make examina-
tion and
diagnosis of
children
returning
after illness.

Examine every
child at least
once a year;
report defects;
also refusal of
pupil to be
examined.

6. They shall visit homes of pupils on recommendation of the principal or attendance officer, and shall make report of said visits to the director of medical inspection.

Visit homes on
recommenda-
tion of princi-
pal or attend-
ance officer.

7. They shall examine teachers, members of the supervising staff, janitors and matrons whenever they deem it necessary to do so.

Examine
teachers,
supervising
staff, janitors,
and matrons.

8. They shall report to the principals of their respective districts the names and schools attended by children who in their judgment should be excluded from school. Upon exclusion of a pupil from school, the school physician shall send a written

Report to
principals
all cases of
exclusion.

General supervision on matters pertaining to school hygiene; report to board of health contagious diseases.

Records and reports.

Attendance, monthly meetings.

Duties of school physician assigned to certifying office.

General duties of supervising nurse.

Determine hours of service of school nurses.

Inspect work; instruct and assign school nurses.

Make requisitions for nurses' supplies.

and sealed notification to the parent or guardian of the child, stating the reason for such exclusion.

9. School physicians shall exercise general supervision on all matters pertaining to school hygiene, and shall report to the director of medical inspection in writing any insanitary conditions they may discover in their respective schools or districts. They shall report to the Board of Health all cases of contagious diseases that may come under their jurisdiction.

10. They shall keep such records and make such reports as shall be prescribed by the director of medical inspection.

11. They shall attend the regular monthly meetings of the school physicians and such other meetings as may be called by the director of medical inspection.

12. The school physician assigned to the certifying office shall report at that office every working day and shall remain in attendance as long as his services shall be required. He shall make a prompt examination of every child referred to him who presents a "Promise of Employment Card" and state in writing his opinion whether or not the child's health and physical ability admits his performing the work he intends to do.

SECT. 243. 1. The supervising nurse shall, under the general supervision of the director of medical inspection, have charge of the school nurses, and be responsible for the efficiency and character of the service rendered by each school nurse.

2. She shall determine, subject to the approval of the director of medical inspection, the hours of service to be rendered on school days, on Saturdays and during vacation periods, by each school nurse.

3. She shall inspect the work of the school nurses, instruct them in their duties, and see that the time spent in each district by the nurse assigned thereto is regularly recorded.

4. She shall, subject to the approval of the director of medical inspection, make requisitions for the necessary supplies for each nurse.

5. She shall keep such records and make such reports as may be required by the director of medical inspection. Records and reports.

SECT. 244. 1. It shall be the duty of the school nurses to assist the school physicians, to see that the directions given by them are carried out, and to give such instructions to the pupils as will promote their physical welfare. General duties of school nurses.

2. They shall receive from the supervising nurse the following information:

(a.) The schools in which they are to perform their duty.

(b.) The hours for visiting each school.

(c.) To whom they shall report in each school.

3. They shall be provided with accommodations in which to perform their duties by the principal or teacher in charge of the school or district to which they are assigned. Accommodations to be provided by principals.

4. They shall report in person to the principal or teacher in charge of the building immediately upon their arrival each day, and shall keep a record of the time of arrival at and departure from each school. Record of arrival at and departure from school.

5. They shall arrange with the school physician assigned to their respective schools or districts a method of daily reports of cases to be visited and treated. Arrange with school physicians for daily reports of cases to be visited and treated.

6. They shall keep a record, in such form as the director of medical inspection shall determine, of the name, age, address, disease and treatment of each pupil referred to them, or who may otherwise come under their personal care. Record of pupils under their care.

7. They shall obtain daily a list of all pupils excluded from their respective schools or districts. Obtain daily reports of excluded pupils.

8. They shall visit excluded pupils at their homes; *provided*, that such visits shall not be made in cases of smallpox, scarlet fever, diphtheria, measles, whooping cough, mumps and other contagious diseases that the director of medical inspection may designate; and shall keep a record of all visits made by them, and the outcome of each case. Visits to excluded pupils at homes.

9. Revisits shall be made from time to time, if necessary. Revisits.

Visits to
homes for
instructions
and
demonstra-
tions.

10. They shall make visits to homes to give necessary instructions or suggestions, and may demonstrate the treatment of pediculosis. In the case of diseases that cannot properly be treated at the home by the nurse or parents, the services of a physician or treatment at a dispensary should be urged.

Reports of
absence
from duty.

11. If from some unforeseen cause, a school nurse is unable to attend to her duty, she shall notify the supervising nurse or director of medical inspection at once by telephone, telegram, or special messenger. This notification shall be followed within five hours by written application for leave of absence. Before returning to duty after leave of absence for any cause, a school nurse shall notify the supervising nurse or director of medical inspection, and shall furnish a certificate from her attending physician, if one has been employed by her during her absence, if the supervising nurse shall so require.

Duties of
medical
inspector
of special
classes.

SECT. 245. 1. The medical inspector of special classes shall perform such duties in connection with the special classes as may be assigned to him by the director of medical inspection.

Duties of
director of
physical
training.

SECT. 246. 1. The director of physical training shall have supervision and control of physical training, military drill, athletics, sports, games and plays engaged in by pupils, or conducted in buildings, yards and grounds under the control of the Board, or in other buildings, yards and grounds that it may have the right to use for such purposes; shall assign the duties to be performed by the various teachers and employees who conduct these activities; be responsible for the efficiency and character of service rendered by each; also for the proper care and use of all physical training and military equipment and supplies.

Enforcement
of rules for
school
athletics.

2. He shall be charged with the enforcement of such rules for the management and control of school athletics as the superintendent may from time to time establish.

Hours of serv-
ice of assistants.

3. He shall determine the hours of service to

be rendered on school days, on Saturdays and on holidays, by his assistants, including employees in playgrounds.

SECT. 247. 1. The instructor and assistant instructors of military drill shall, under the general supervision of the director of physical training, have charge of instruction in that subject.

Duties of instructor and assistant instructors of military drill.

2. The armorer shall, under the general supervision of the instructor of military drill, have charge of keeping the military equipment provided for the schools in proper condition for use.

Duties of armorer.

SECT. 248. 1. The director of special classes shall, under the direction of the superintendent, have general supervision and control over special classes.

Duties of director of special classes.

SECT. 249. 1. The director of vocational guidance shall hold conferences with the vocational counselors of the day and evening elementary and high schools; shall give vocational information and supervise the instruction of elementary school pupils in the same; shall render assistance to children who go to work, and shall exercise general oversight over them.

Duties of director of vocational guidance.

SECT. 250. 1. The director of penmanship shall have general supervision and control over the instruction in penmanship in day schools.

Duties of director of penmanship.

SECT. 251. 1. Clerical assistants and bookkeepers in Normal, Latin and day high schools shall be required to be on duty from 8.30 o'clock A. M., to 4.30 o'clock P. M., with one hour intermission for luncheon, on all school days during the year, and on such other days as their respective principals may direct; *provided*, that services rendered on Saturdays may not extend later than 1 o'clock P. M.

Hours of duty of clerical assistants and bookkeepers in day high, Latin and Normal Schools.

2. Clerical assistants and bookkeepers in day industrial schools may be required by their respective principals to be on duty from one-half hour before the beginning of the session until one-half hour after the close of the day or evening session, with one hour intermission for luncheon, on all school days throughout the year; *provided*, that

Hours of duty of clerical assistants and bookkeepers in day industrial schools.

eight hours shall constitute a day's work. Such clerical assistants and bookkeepers may also be required by their respective principals to render service on other than school days; *provided*, that services rendered on Saturdays may not extend later than 1 o'clock P. M.

Hours of
duty of
clerical
assistants, day
elementary
schools.

3. Clerical assistants in day elementary schools shall be required to be on duty from 8.30 o'clock A. M. to 4.30 o'clock P. M., with one hour intermission for luncheon, on all school days during the year, and on such other days as their respective principals may direct; *provided*, that service rendered on Saturdays may not extend later than 1 o'clock P. M.

Hours of
duty of
clerical
assistants,
evening
schools.

4. Clerical assistants in evening schools shall be required to be on duty not earlier than 7.15 o'clock P. M., and to remain on duty not later than 9.30 o'clock P. M.

CHAPTER XIII.

Appointments, Reappointments, Promotions, Transfers, Removals and Resignations of Teachers and Members of Supervising Staff; Clerical Assistants, Bookkeepers, etc.

Appointments
made by
superintendent.

SECT. 255. 1. Appointments of teachers, members of the supervising staff, clerical assistants, bookkeepers, and other persons employed in similar capacities in the schools, shall be made by the superintendent, subject to the approval of the Board, except original appointments of temporary teachers for a period not exceeding two months, which may be made by the superintendent at his discretion and be by him reported to the Board at its next meeting. Temporary appointments may, with the approval of the Board, be renewed for successive periods of four months; *provided*, that such appointments shall not extend beyond the close of the school term in June of each year.

Times when
appointments
may be made.

2. Appointments of teachers to the day school service, of members of the supervising staff, and of other persons whom the superintendent is

authorized to appoint, may be made at such times as the needs of the service may require; *provided*, that no appointments of teachers to permanent positions in the day schools shall be made to take effect between the first Monday in May and the close of the same school year.

3. The appointments of principals of summer review schools shall be made in May, of other teachers, in June of each year, and at such other times as the needs of the service may require.

Appointments of summer review school teachers.

4. Teachers holding permanent positions in the day school service shall alone be eligible for appointment in summer review schools.

Eligibility for appointment to summer review schools.

5. The appointment of principals of evening schools shall be made in June of each year, of other teachers in the month of September, and at such other times as the needs of the service may require.

Appointments of evening school teachers

6. The term of all persons appointed in accordance with the provisions of this section shall date from the time they enter upon their duties.

Beginning of term of appointment.

SECT. 256. 1. No person who has not been regularly appointed in accordance with the regulations shall be employed or give instruction in the schools.

Only persons regularly appointed to be employed.

2. No person shall serve in any position other than that for which the certificate qualifies the holder thereof, and to which such person has been appointed, nor from a date prior to the date of issue of the certificate of qualification held by such person.

Appointments in accordance with certificates.

3. No person who does not hold a certificate of qualification of the proper grade shall give any instruction in the schools, except pupils attending the Boston Normal School who may be assigned to observe and practice in the schools, and lecturers whose appointment shall have been approved by the Board.

Persons authorized to give instruction.

SECT. 257. 1. The appointment of any teacher or member of the supervising staff, clerical assistant, bookkeeper, aid or student aid, who does not begin service within four weeks of the date of appointment shall become null and void.

Service must begin within four weeks of appointment

Expiration of appointments of special assistants.

SECT. 258. 1. Appointments of special assistants in day elementary schools shall not extend beyond the close of the school term in June of each year.

Expiration of appointment of playground teachers.

2. Appointments of playground teachers and of playground employees shall not extend beyond the first day of December in each year, unless otherwise expressly authorized by the Board.

Appointments of substitutes from emergency list.

SECT. 259. 1. A list of substitute teachers shall be established annually by the superintendent, with the approval of the Board, to be known as the emergency list, which list may contain the names of persons on the eligible lists. When the services of a substitute teacher are required, the principal of the school or district shall so notify the department of practice and training which shall make an assignment to such service from the emergency list.

Conferences with respect to appointments.

SECT. 260. 1. Whenever a vacancy occurs in a subordinate position in the teaching force or supervising staff, or an additional appointment thereto is required, the principal of the school or district, or the director concerned, shall so notify the superintendent and confer with him with reference to filling the vacancy.

Designations to fill temporary absences, elementary schools.

SECT. 261. 1. When sub-masters in charge, sub-masters, masters' assistants in charge, master's assistants, first assistants, grammar schools, first assistants in charge or first assistants, kindergarten, are absent, a substitute of assistant's rank may be temporarily appointed to fill the vacancy, and if such absence is for a continuous period exceeding two weeks in length, the superintendent may designate some teacher in the building to act as sub-master in charge, sub-master, master's assistant in charge, master's assistant, first assistant, grammar school, as first assistant in charge, or as first assistant, kindergarten, during the absence of the regular teacher.

Designations to fill temporary absences, Normal, Latin and day high schools.

2. When teachers in the Normal, Latin and day high schools of any rank are absent, a substitute of equal or lower rank may be appointed, at the discretion of the superintendent.

SECT. 262. 1. In case of the death or disability of the principal of a school or district, or of the director of a department, it shall be the duty of the senior teacher or member of the supervising staff highest in rank who is present in such school or department, to notify immediately the superintendent who shall designate some person in the regular school service to take charge of such school or department until the position is otherwise filled in accordance with the rules and regulations. In such cases the superintendent may, in his discretion, appoint a temporary teacher or member of the supervising staff. In case of the death or disability of a sub-master in charge, master's assistant in charge, sub-master, master's assistant, first assistant, grammar school, first assistant in charge or first assistant, kindergarten, the superintendent may, in his discretion, designate some person in the regular school service to perform the duties of the position thus made vacant until it is otherwise filled in accordance with the rules and regulations. The superintendent shall report such action to the Board at the meeting next following.

Death or disability of principal or director to be reported.

SECT. 263. 1. The character of service rendered by teachers and members of the supervising staff in schools or departments shall be inspected personally by the assistant superintendent in charge, who shall biennially make a written report to the superintendent with respect to each such person in such form as may be required by the superintendent.

Inspection of work of teachers.

SECT. 264. 1. Teachers and members of the supervising staff who are not on tenure, may be annually reappointed by the superintendent, who shall act thereon in the month of June, subject to the approval of the Board, and those eligible for appointment on tenure may be so appointed at the same time, subject to the approval of the Board. Such appointments and reappointments shall take effect on the first day of the following September, and shall be contained in a printed report which shall include a statement of the number of pupils

Annual reappointment of teachers.

in each school or district, and of the number of teachers to which each school or district may be entitled under the regulations. The report shall also contain a statement of the schools or districts in which the number or rank of teachers prescribed by the regulations has been exceeded, with the reason for such excess.

Eligibility for
tenure.

SECT. 265. 1. Teachers who have served successfully in the same rank or grade in the day school service for four successive years, except state-aided schools, and who have passed successfully a first promotional examination, and members of the supervising staff who have served successfully for the same period in the same rank or grade, shall be eligible for appointment on tenure during good behavior and efficiency, to take effect on the first day of September next following the completion of the prescribed length of service.

Eligibility for
tenure of
promoted
teachers.

2. Teachers and members of the supervising staff who are on tenure and who are promoted to a higher position, may, on the completion of one year of satisfactory service in the higher position, be appointed on tenure in the new position; *provided*, that any teacher serving on tenure who may be promoted to the position of principal of a Normal Latin, day high, day elementary, continuation, or day industrial school, may be annually reappointed to such position for two years, and may then be appointed on tenure, to take effect on the first day of September next following the completion of the prescribed length of service. The provisions of this paragraph shall not apply to subordinate teachers in state-aided schools.

Re-entry of
teachers to
service.

SECT. 266. 1. Teachers and members of the supervising staff who re-enter the service, shall be appointed and reappointed in the same manner as new teachers; *provided*, that those who voluntarily retire from the service may, within a period of six years from the first day of January next following the date of their resignation, be reappointed to a position of the same grade or rank, or to a position of equivalent or lower rank to that held at the date of retirement; and *provided further*, that

such a person is nominated, with the approval of the assistant superintendent in charge, by a principal in whose school there is a vacancy which such person is qualified to fill.

2. Any person who may be appointed or elected by promotion as an officer of the Board or as a member of the supervising staff may, at the conclusion of such service, be reappointed to a position of the same or lower rank than that held at the time of such appointment or election.

Reappointments to former ranks.

SECT. 267. 1. A woman teacher holding a permanent position in a day school may be employed as a teacher in playgrounds during the regular school term and for not more than one-half of the summer vacation period; *provided*, that the written consent is secured of the principal of the day school in which such teacher is employed; and *provided further*, that the director of medical inspection certifies that in his opinion the teacher can do the work without detriment to her health, or to the discharge of her duties in the day school.

Employment of permanent teachers in playgrounds.

SECT. 268. 1. No principal or woman teacher of a day school in Boston shall be employed in the evening schools of Boston or elsewhere; *provided*, that at the discretion of the superintendent, any woman teacher employed in a day school who has successfully passed her first promotional examination, or who was appointed to the regular day service prior to September 1, 1906, may be employed in the evening schools of Boston; and *provided further*, that any woman teacher employed in the evening schools who is appointed to a permanent position in a day school may, at the discretion of the superintendent, continue such evening service until the close of the term for which she has been appointed, but no longer. Women teachers of day schools on leave of absence without pay may be employed in evening schools during the term of such absence.

Employment of day school teachers in evening schools.

2. No person permanently appointed to a day school shall be appointed to the same grade or rank in the evening schools for more than five years in any period of six consecutive years. Service of

Limitation of evening school service.

more than forty evenings in any term shall be deemed a year, but service rendered prior to June 30, 1916, shall be reckoned on the following basis: Service of less than three years shall be reckoned as one year; service of three years or more, but not exceeding six years, shall be reckoned as two years; service of more than six years, shall be reckoned as three years.

Promotions to rank of master, day elementary schools.

SECT. 269. 1. Promotions to the rank of master, day elementary schools, shall be made from the first three names heading the eligible list established by the board of superintendents.

Promotion of teachers.

2. Promotions of other teachers and members of the supervising staff shall be made in the order of merit as determined by quality, character, and length of service.

Transfer of teachers.

SECT. 270. 1. Teachers and members of the supervising staff may be transferred to positions of the same rank and salary by the superintendent, subject to the approval of the Board.

Change in rank of teachers.

SECT. 271. 1. The rank of any teacher may be changed by the superintendent, subject to the approval of the Board, whenever the number of pupils upon which the rank of such teacher depends shall so warrant; but the change shall take effect only at the beginning of the month following action by the Board.

Discontinuance of teachers, summer review schools.

SECT. 272. 1. Teachers in the summer review schools may be discontinued, at the discretion of the superintendent, whenever the average attendance shall have fallen below the number authorizing their employment.

Discontinuance of teachers, evening schools.

SECT. 273. 1. Teachers in the evening schools shall be discontinued at the close of any month in which the average attendance of pupils is less than the number authorizing their employment, or earlier, at the discretion of the superintendent; *provided*, that in evening schools where there is but one class in any subject, such class may continue until the close of the term unless the number of pupils therein is less than ten.

Removal of teachers.

SECT. 274. 1. Teachers and members of the supervising staff and other persons whom the

superintendent is authorized to appoint, may be removed from the service by him for cause at any time, subject to the approval of the Board; *provided*, that persons so removed may upon written application to the secretary of the Board, be given a hearing by the Board. No person shall receive any compensation for services rendered after removal.

SECT. 275. 1. The marriage of a woman teacher or woman member of the supervising staff shall operate as a resignation of her position, and it shall be the duty of the principal of the school or district, or the director of the department concerned to report such marriages forthwith to the superintendent and to the business agent. If the superintendent appoints a married woman as a teacher or as a member of the supervising staff, he shall so report to the Board.

Resignation
and
appointment
of married
women.

SECT. 276. 1. The employment of teachers and members of the supervising staff shall terminate on the thirty-first day of August next following the seventieth birthday of such persons.

Termination of
service at
seventy years.

CHAPTER XIV.

Number and Rank of Teachers and Members of Supervising Staff.

SECTION 280. 1. When the appointment of a teacher in a day school is under consideration, the number of pupils belonging on the last school day of the month preceding the date on which the appointment is made, shall be used as the basis upon which to determine the number and rank of teachers to which a school or district is entitled, except as provided in section 293, paragraph 6.

New
appointments.

2. When the annual reappointments and appointments on tenure are under consideration, the largest number of pupils belonging on any one day between the first day of September and the first day of April of the current school year, shall be used as the basis upon which to determine the number and rank of teachers to which a school or district is entitled, except as provided in section 293, paragraph 6.

Reappoint-
ments.

Not to apply to
state-aided
schools.

3. The provisions of this section shall not apply to the reappointment of teachers in state-aided schools.

DAY ELEMENTARY SCHOOL DISTRICTS.

Ranks of
teachers.

SECT. 281. 1. Teachers of day elementary schools shall consist of one principal holding the rank of master for each district; sub-masters in charge; master's assistants in charge; sub-masters; master's assistant; first assistants, grammar; first assistants in charge; assistants; first assistants in charge of special classes; instructors, special classes; instructors, speech improvement classes; instructors, classes for the conservation of eyesight; and pre-vocational assistants.

Higher ranks
allowed.

2. Teachers of ranks higher than that of assistant may be appointed as follows:

Sub-master in
charge; mas-
ter's assistant
in charge.

(a.) One sub-master in charge or one master's assistant in charge in buildings containing classes of at least the first six grades, which have formerly constituted the central elementary school of the district, and which either because of reorganization, consolidation or association of districts, or because of the establishment of intermediate classes, continue to require direct administrative supervision.

(b.) Only those persons who on February 1, 1919, hold the position of sub-master or master's assistant, or who may hereafter in accordance with the rules and regulations be appointed or promoted to these ranks, shall be eligible for appointment as sub-master in charge or as master's assistant in charge.

Sub-master.

(c.) One sub-master in each district except those attended exclusively by girls in grades above the third. An additional sub-master may be appointed if the number of boys in grades above the third exceeds six hundred.

Master's
assistant.

(d.) One master's assistant in each district.

First assistant,
grammar.

(e.) One first assistant, grammar school, if the number of girls in grades above the third exceeds six hundred. This rank, except as provided in

this paragraph, shall be abolished as the position becomes vacant by the retirement of present incumbents.

(f.) One first assistant in charge in each school building, other than the main building of a district, in which there are six or more teachers of any grade, including kindergartens, but no sub-master.

First assistant
in charge.

(g.) One first assistant in charge of special classes in buildings exclusively occupied by not less than six special classes.

First assistant
in charge,
special classes.

3. The rank of a single teacher in charge of a kindergarten may be either that of first assistant or assistant. If there are two or more teachers in a kindergarten, one shall hold the rank of first assistant. Whenever the number of pupils entitles a kindergarten to four teachers, such kindergarten may be divided into two kindergartens.

Ranks of
kindergarten
teachers.

4. Attendants may be appointed in open-air classes at the discretion of the superintendent, who shall report those appointments to the Board. Such appointments shall not extend beyond the close of the school year in which they are made.

Attendants,
open-air
classes.

5. Except as provided in paragraph 6 of this section, the number of teachers to which a day elementary school district shall be entitled shall be based on the following quota of pupils belonging on the last school day of the preceding month:

Number of
teachers
allowed.

Kindergartens	25
Grades I., VII. and VIII.	40
Grades II. to VI., inclusive	42
Classes for conservation of eyesight	12
Hospital classes	15
Open-air classes	36
Pre-vocational classes	30
Rapid advancement classes	30
Special classes	15
Special English classes	30
Ungraded classes	30

and in speech improvement classes there may be one teacher for every fifteen pupils in average hourly attendance for each four-hour day for the month next preceding the date upon which an appointment is made.

6. Additional teachers may be appointed in kindergartens for an excess of fifteen pupils, and in Grades I. to VIII., inclusive, for an excess of thirty pupils.

Additional
teachers for
excess pupils.

Transfer or
discontinuance
of teachers.

7. Teachers in kindergartens may be transferred or discontinued when the number of pupils belonging is less than fifteen to a teacher; and in Grades I. to VIII., inclusive, teachers may be transferred or discontinued when the number of pupils belonging is less than forty to a teacher, *provided*, that in the case of a transfer of a teacher whom the district might hold on a basis of forty pupils, the district shall be entitled to a regularly appointed teacher in her place.

Number of
Teachers.

8. The number of teachers to which a day elementary school district is entitled under the provisions of paragraphs 5, 6 and 7 of this section shall be determined in a manner illustrated by the following example:

	Number of Pupils Belonging.	Standard Size of Classes.	Number of Teachers Allowed.	Excess Pupils.	Shortage of Pupils.
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Number of Teachers in Kindergarten.

Kindergartens.....	46 divided by 40	2	6
Kindergartens.....	29 divided by 25	1	4

Number of Teachers Above the Kindergarten.

Grades I., VII., VIII.	204 divided by 40	5	4	
Grades II. to VI., inclusive.	858 divided by 42	20	18	
Classes for the conservation of eyesight.	15 divided by 12	1	3	
Hospital classes.	30 divided by 15	2		
Open-air classes.	37 divided by 36	1	1	
Pre-vocational classes.	85 divided by 30	3		5
Rapid advancement classes.	62 divided by 30	2	2	
Special classes.	13 divided by 15	1		2
Special English classes.	95 divided by 30	3	5	
Ungraded classes.	70 divided by 30	2	10	
<hr/>				
Totals.	1,469	40	43	7
For excess pupils.	36 divided by 30	1		
<hr/>				
Number of teachers above the kindergarten,	41			

NOTE.—Only those classes which are organized as a unit are included in the above tabulation.

9. Special assistants may be appointed in schools where the number of pupils reaches or exceeds the number indicated in the following tabulation: Special assistants.

	Number of Pupils Required.
Grade I.	50
Grades II. to VIII., inclusive	60
Special classes	20
Special English classes	40
Ungraded classes	40

in Modern Language classes, not more than one to a district, and in classes of first assistants in charge, in kindergartens, in the Horace Mann School, and in schools where there is a sub-master in charge or a master's assistant in charge, on the recommendation of the superintendent.

Temporary Teachers.

10. Temporary teachers may be appointed by the superintendent in day elementary schools in place of teachers who are absent on leave, or of teachers who are assigned without change of rank or salary to schools of a higher grade or by authorization of the Board. Temporary teachers.

Clerical Assistants.

11. Clerical assistants may be appointed by the superintendent in day elementary schools when the number of pupils exceeds twenty-five hundred. Clerical assistants.

Teachers of Household Science and Arts.

SECT. 282. 1. Teachers of household science and arts in day elementary and day intermediate schools shall be pre-vocational instructors, teachers of cookery and teachers of sewing. Ranks of teachers.

2. They shall be appointed to the corps of teachers of household science and arts and assigned by the superintendent to service in one or more schools in accordance with the requirements of the course of study. Appointment and assignment.

3. The number of teachers of cookery and of sewing shall be determined by the Board, on recommendation of the superintendent. Number of teachers allowed.

Pre-vocational Centers for Girls.

Establishment
of pre-voca-
tional centers
for girls.

SECT. 283. 1. Such pre-vocational centers for girls may be established by the superintendent as the Board may from time to time approve.

Ranks of
teachers.

2. Teachers for pre-vocational centers for girls shall be pre-vocational assistants and pre-vocational instructors.

Number of
teachers
allowed.

3. The number of pre-vocational instructors shall not exceed the number of pre-vocational centers for girls established under the regulations. They shall be assigned to the shop work of such centers only.

Assignment of
teachers of
cookery and
sewing.

4. Teachers of cookery and teachers of sewing may be assigned to pre-vocational centers for girls.

Teachers of Manual Arts.

Ranks of
teachers.

SECT. 284. 1. Teachers of shop work and manual training in the day elementary and day intermediate schools shall be shop foremen; foremen, shopwork; shop instructors; instructors, shop work; instructors in manual training; and assistant instructors in manual training.

Appointment
and assignment.

2. They shall be appointed to the corps of teachers of manual arts, and assigned by the superintendent to service in one or more schools, in accordance with the requirements of the course of study.

Number of
teachers
allowed.

3. The number of foremen, shop work; instructors, shop work; instructors in manual training and assistant instructors in manual training shall be determined by the Board, on recommendation of the superintendent.

Assignment to
pre-vocational
centers for
boys.

4. Foremen, shop work; and instructors, shop work may be assigned to pre-vocational centers for boys without change of rank or salary.

Pre-vocational Centers for Boys.

Establishment
of pre-voca-
tional centers
for boys.

SECT. 285. 1. Such pre-vocational centers for boys may be established by the superintendent as the Board may from time to time approve.

Ranks of
teachers.

2. Teachers for pre-vocational centers for boys shall be shop foremen; shop instructors; and pre-vocational assistants.

3. The number of shop foremen; shop instructors; and foremen, shop work and instructors, shop work assigned to pre-vocational classes for boys shall not exceed the number of such classes.

Number of
teachers
allowed.

4. Shop foremen; shop instructors; and pre-vocational assistants may be assigned to intermediate schools without change of rank or salary.

Assignment to
intermediate
schools.

BOSTON DISCIPLINARY DAY SCHOOL.

SECT. 286. 1. Teachers in the Boston Disciplinary Day School shall consist of assistants assigned by the superintendent from day elementary schools. The number of such teachers shall not exceed one for each fifteen pupils belonging.

Ranks and
number of
teachers.

HORACE MANN SCHOOL FOR THE DEAF.

SECT. 287. 1. Teachers in the Horace Mann School for the Deaf shall consist of a principal, an assistant principal, and assistants.

Ranks of
teachers.

2. Exclusive of the principal, there shall be one teacher for every ten pupils, and an additional teacher may be appointed for an excess of five pupils. There shall be at least one teacher for each grade.

Number of
teachers
allowed.

DAY SCHOOL FOR IMMIGRANTS.

SECT. 288. 1. Teachers in the Day School for Immigrants shall consist of instructors and special assistants. There shall be one instructor for each group of pupils representing three hundred pupil hours of instruction per week.

Ranks and
number of
teachers.

2. An additional instructor may be employed for an excess of two hundred pupil hours of instruction per week.

Additional
teacher.

3. Special assistants may be appointed on a basis of one for each thirty pupil hours of instruction per half day.

Special
assistants.

4. In addition to their periods of instruction, teachers shall perform such follow-up work as may be required by the director of evening schools.

Follow-up
work.

BOSTON TRADE SCHOOL.

Ranks of
teachers.

SECT. 289. 1. Teachers in the Boston Trade School shall consist of a principal, holding the rank of master; a vice principal; division heads; instructors in academic and technical branches; shop foremen; shop instructors; and instructors.

Number of
teachers
allowed.

2. There shall be a sufficient number of teachers of the aforesaid ranks, exclusive of the principal, to equal one for every fifteen pupils.

Apprentice
helpers and
toolkeepers.

3. In addition thereto, there shall be as many apprentice helpers and toolkeepers as the superintendent may from time to time appoint, subject to the approval of the Board, for a period not extending beyond the first day of September next following their appointment.

Vocational
assistant.

4. There shall be one vocational assistant for every three hundred pupils.

Bookkeeper
and clerical
assistant.

5. There shall be one bookkeeper and one clerical assistant.

*Evening Classes.*Ranks of
teachers.

6. In the Boston Trade School, evening classes, assistants in charge; assistants; second assistants; and toolkeepers may be appointed.

Number of
teachers.

7. There shall be one assistant for every fifteen pupils.

Second
assistant.

8. One second assistant may be appointed when the number of pupils in a class reaches twenty-five.

Clerical
assistant.

9. One clerical assistant may be appointed.

TRADE SCHOOL FOR GIRLS.

Ranks of
teachers.

SECT. 290. 1. Teachers in the Trade School for Girls shall consist of a principal, holding the rank of master; heads of departments; vocational assistants; trade assistants; and helpers.

Number of
teachers.

2. There shall be a head of department for each trade taught and for related work; a vocational assistant for every one hundred pupils; and a sufficient number of trade assistants and helpers to equal one for every fifteen pupils.

Aids and
student aids.

3. In addition thereto, there shall be as many aids and student aids as the superintendent may

from time to time appoint, subject to the approval of the Board, for a period not extending beyond the first day of September next following their appointment.

4. One instructor in personal and shop hygiene may be appointed. Instructor in personal and shop hygiene.

5. There shall be one bookkeeper and one clerical assistant. Bookkeeper and clerical assistant.

DAY INTERMEDIATE SCHOOLS.

SECT. 291. 1. Teachers of day intermediate schools shall consist of one principal holding the rank of master for each intermediate school; submasters; masters' assistants; first assistants, grammar; and assistants. Ranks of teachers.

2. Teachers of ranks higher than that of assistant may be appointed in day intermediate schools in accordance with the regulations pertaining to persons of corresponding rank in day elementary schools. Appointment to ranks higher than assistant.

3. In computing the number of teachers to which a day intermediate school is entitled, forty pupils shall be taken as a class unit. Basis for appointment.

4. In addition to the regular teachers, one special assistant may be appointed in a day intermediate school for ten classes, and an additional special assistant may be appointed for each additional five classes. Special assistants.

BOSTON CLERICAL SCHOOL.

SECT. 292. 1. Teachers in the Boston Clerical School shall consist of a principal with the rank of head master, one head instructor in bookkeeping, one head instructor in stenography, clerical instructors, clerical assistants, and English teachers. Ranks of teachers.

2. There shall be one teacher for every thirty-six pupils. Number of teachers.

LATIN AND DAY HIGH SCHOOLS.

SECT. 293. 1. Teachers in each Latin and day high school shall consist of a principal, holding the rank of head master, and subordinate teachers as Ranks of teachers.

follows: Masters, heads of departments; first assistants, heads of departments; junior masters; assistants; instructors; assistant instructors; coordinators; instructors in co-operative branches; industrial instructors; and industrial assistants.

Temporary
teachers, and
junior
assistants.

2. Temporary teachers and junior assistants may be appointed in Latin and day high schools; but the total number of teachers in said schools shall not exceed the total number of teachers to which a school is entitled as provided in this section.

Heads of Departments.

Duties of
heads of
departments.

3. Heads of departments in Latin and day high schools shall have distinct duties in addition to teaching. These duties shall include the supervision of a subject of study or of a curriculum, or of both.

Number of
heads of
departments.

4. Heads of departments may be appointed for the supervision of not fewer than two thousand pupil hours of instruction per week; *provided*, that the number of heads of departments shall be limited to four for schools of seven hundred fifty pupils or less, with one additional head of department for each additional two hundred fifty pupils; and *provided further*, that not more than seven heads of departments shall be appointed in any school.

Additional
heads of
departments.

5. Schools which on January 1, 1919, had heads of departments in excess of the number specified above shall not be entitled to additional heads of departments.

Teachers.

Basis for
determining
number of
teachers.

6. The whole number of teachers to which a Latin or day high school is entitled, exclusive of the principal, shall be determined by standards stated in terms of pupil hours* of instruction, as follows:

Report on
number of
pupil hours.

(a.) During the first week of October, or on some other date fixed by the superintendent, each head master shall report to the superintendent, in such manner as the superintendent may determine,

* A "pupil hour" is understood to mean one period of instruction per week for one pupil even though that period may be, and usually is, less than one hour in length.

the number of pupil hours* of instruction given by each teacher in his school.

(b.) All classes in Latin and day high schools, except classes in hygiene, physical training and choral practice, having more than forty-five pupils shall be organized only with the approval of the superintendent.

Approval of superintendent for large classes.

(c.) No classes with fewer than fifteen pupils shall be organized in any Latin or day high school without the approval in advance of the superintendent.

Approval of superintendent for small classes.

(d.) The standard pupil hours of instruction for men in academic subjects shall be seven hundred sixty-eight pupil hours per week, based on twenty-four periods of teaching per week with thirty-two pupils in each class.

Standard for men.

(e.) The standard pupil hours of instruction for women in academic subjects shall be seven hundred four pupil hours per week, based on twenty-two periods of teaching per week with thirty-two pupils in each class.

Standard for women.

(f.) The standard pupil hours of instruction for teachers in sewing, cookery, millinery, shop work, drawing and co-operative or industrial work shall be six hundred pupil hours per week, based on thirty periods of teaching per week with twenty pupils in each class.

Standard for teachers for certain subjects.

7. Modifications of the above standards shall be made for certain teachers, as follows:

Modifications of standards.

(a.) For each teacher of science a deduction of eight pupil hours for each laboratory hour, in case the recitation section is divided into two sections for laboratory work; or thirteen pupil hours for each laboratory hour, in case the recitation section recites as a laboratory class.

In science.

(b.) For each teacher designated as co-ordinator in co-operative industrial courses, a deduction of four pupil hours for each pupil pursuing such course.

Co-ordinator, industrial branches.

* The number of pupil hours per week in a subject is computed by multiplying the number of pupils in the class by the number of periods the class recites each week.

Co-ordinator
in commercial
branches.

(c.) For each person designated as co-ordinator in commercial branches, a deduction of four pupil hours for each pupil pursuing commercial branches which require the services of a co-ordinator.

Co-ordinator
in salesman-
ship.

(d.) For each teacher of salesmanship who acts as a co-ordinator in such work, a deduction of four pupil hours for each pupil pursuing work outside of school.

Number of
additional
teachers, or
teachers in
excess.

8. The number of teachers* to which a Latin and day high school is entitled shall be computed as follows:

(a.) The number of pupil hours of instruction of each teacher, as shown in the report called for in paragraph 5 (a), shall be compared with the appropriate standard established in this section.

(b.) If the number of pupil hours is less than the established standard, the number of such pupil hours shall be listed as minus.

(c.) If the number of pupil hours is more than the established standard, the number of such pupil hours shall be listed as plus.

(d.) The total number of pupil hours in the plus column and in the minus column shall be compared and the difference between them determined.

(e.) The number of additional teachers to which a school attended exclusively by girls or by boys and girls is entitled shall be determined by dividing the plus balance by seven hundred four — the standard for women teachers.

(f.) The number of additional teachers to which a school attended exclusively by boys is entitled shall be determined by dividing the plus balance by seven hundred sixty-eight — the standard for men teachers.

(g.) The number of teachers in excess in a school attended exclusively by girls or by boys and girls shall be determined by dividing the minus balance by seven hundred four — the standard for women teachers.

* The total number of teachers authorized in a boys' school may be found by dividing the total number of pupil hours of instruction per week by 768 — the standard for men.

The total number of teachers in a school taught by both men and women cannot be accurately determined in the same manner because the standards for men and women differ.

(h.) The number of teachers in excess in a school attended exclusively by boys shall be determined by dividing the minus balance by seven hundred sixty-eight — the standard for men teachers.

9. The following table will illustrate the method of making the above computations:

NAME OF TEACHER.	Kind of Class.	Number of Periods Teaching Per Week.	Number of Pupils in the Class.	Number of Pupil Hours Taught Per Week.	Standard.	COMPARISON OF PERFORMANCE WITH STANDARD.	
						Plus.	Minus.
Miss A.....	A	20	37	740	704	36	
Mr. B.....	A	20	33	660	768		108
Miss C.....	A	11	36	396	624		48
	B	10	18	180			
Mr. D.....	C	12	18	216	208	8	
Miss E.....	C	12	17	204	240		36
Mr. F.....	A	10	38	380	676		68
	C	12	19	228			
Other teachers omitted.....						2,214	1,283
Totals for the school.....						2,258	1,543

A comparison of the number in the plus column with the number in the minus column shows a difference of 715; 715 divided by 704 (the pupil hour standard for women teachers) gives a quotient of 1 with an excess of 11. This computation indicates that this school is entitled to one additional teacher over and above the number of teachers now employed.

MISS A.

Miss A teaches 20 periods per week of English, which is defined as "A" work, with 37 pupils in a class, making a total of 740 pupil hours of instruction per week. The standard for women in "A" work is 704 pupil hours. The difference between the 740 pupil hours which she teaches and the standard of 704 pupil hours for women is 36 pupil hours. Since her performance is in excess of the standard, this 36 is placed in the plus column to the credit of this teacher and finally to the credit of the school in the total.

MR. B.

Mr. B teaches 20 periods per week of mathematics, which is defined as "A" work, with 33 pupils in a class, making a total of 660 pupil hours of instruction per week. The standard for men in "A" work is 768 pupil hours. The difference between the 660 pupil

hours which he teaches and the standard of 768 pupil hours for men is 108 pupil hours. Since his performance is short of the standard, this 108 is placed in the minus column and charged up to this teacher and finally against the school in the total.

Miss C.

Miss C teaches 21 periods per week of science. Eleven periods are lecture and recitation periods, which are defined as "A" work; and 10 periods are laboratory work, which is defined as "B" work. In the recitation she has 36 pupils in the class: $11 \times 36 = 396$ pupil hours of instruction per week in "A" work. In the 10 laboratory periods each section is divided into two parts, each one of which has 18 pupils; $10 \times 18 = 180$ pupil hours of instructions per week in "B" work. A deduction of 8 pupil hours of instruction for each laboratory period is allowed from the standard of work for a science teacher whose class is divided for laboratory work; thus $704 - (8 \times 10) = 624$ — the computed standard of work for this teacher. The difference between 576 (396 "A" work + 180 "B" work) pupil hours which she teaches and 624, the computed standard, is 48. Since her performance is short of the standard, this 48 is placed in the minus column and charged up to this teacher and finally against the school in the total.

Mr. D.

Mr. D teaches 12 periods per week of co-operative industrial work, which is defined as "C" work, with 18 pupils in a class, making a total of 216 pupil hours of instruction per week. His work involves supervision of the boys in the shops, for the purpose of which he is designated as co-ordinator. For such work a deduction from the established standard of 4 pupil hours for each pupil in the co-operative industrial course is allowed. In this course there are 98 different pupils. Deducting $392 (4 \times 98)$ from 600 (the standard for all "C" work) = 208 — the computed standard for Mr. D. Comparing the 216 pupil hours which he teaches per week with 208, the computed standard, gives a difference of 8 pupil hours. Since this is in excess of the standard, this 8 is placed in the plus column to the credit of this teacher and finally to the credit of the school in the total.

Miss E.

Miss E teaches cookery, which is defined as "C" work. She teaches 12 periods in this school (the remainder of her time in another school), with 17 pupils in a class, making a total of 204 pupil hours of instruction per week. The standard for teachers of cookery is 600 pupil hours. Since Miss E teaches only $\frac{2}{5}$ (12 out of 30 periods) of her time in this school, the standard for her is computed as follows: $\frac{2}{5}$ of 600 = 240. Comparing the 204 pupil hours of instruction with the computed standard (240) shows a difference of 36 pupil hours. Since her performance is short of the standard, this 36 is placed in the minus column and charged up to this teacher and finally against the school in the total.

Mr. F.

Mr. F teaches 10 periods of mathematics, which is defined as "A" work, and 12 periods of shop work, which is defined as "C" work. He has 38 pupils in his mathematics class: $10 \times 38 = 380$ pupil hours of instruction per week in "A" work. In shop work he

has 19 pupils in each class: $12 \times 19 = 228$ pupil hours of instruction per week in "C" work. Since he teaches 10/22 of "A" work and 12/22 of "C" work, obviously his standard must be computed: $10/22$ of 768 (349) + $12/22$ of 600 (327) = 676. Comparing his 608 pupil hours (380 "A" work + 228 "C" work = 608) with the computed standard shows a difference of 68 pupil hours. Since this is short of the standard, this 68 is placed in the minus column and charged up to this teacher and finally against the school in the total.

10. The number of junior masters and instructors to which a Latin or day high school attended exclusively by boys is entitled, shall be based on the number of pupils attending such school as follows:

Number of junior masters and instructors allowed.

Two junior masters and instructors for a school with 245 pupils, and an additional junior master or instructor for each additional thirty-five pupils; *provided*, that in no case shall the total number of junior masters and instructors exceed the total number of teachers allowed the school on the pupil hour basis.

The number of junior masters and instructors to which a Latin or day high school attended exclusively by girls, or attended by boys and girls, is entitled, shall be based upon the number of pupils attending such school, and in accordance with the following table:

	Schools Attended Exclusively by Girls.	Schools Attended by Boys and Girls.
From 210 to 420.....	1	1
From 420 to 560.....	2	2
From 560 to 700.....	2	3
From 700 to 840.....	3	4
From 840 to 980.....	3	5
From 980 to 1,120.....	4	6
From 1,120 to 1,400.....	4	7
From 1,400 to 1,540.....	4	8
From 1,540 to 1,680.....	5	9
From 1,680 to 1,820.....	5	10
From 1,820 to 1,960.....	6	11
From 1,960 to 2,100.....	6	12
From 2,100 to 2,240.....	7	13
From 2,240 to 2,380.....	7	14
From 2,380 to 2,520.....	8	15
From 2,520 to 2,660.....	8	16
From 2,660 to 2,800.....	9	17
From 2,800 to 2,940.....	9	18
From 2,940 to 3,080.....	10	19
From 3,080 to 3,220.....	10	20
From 3,220 to 3,360.....	11	21
From 3,360 to 3,500.....	11	22
From 3,500 to 3,640.....	12	23
From 3,640 to 3,780.....	12	24
From 3,780 to 3,920.....	13	25
From 3,920 to 4,060.....	13	26

*Special Assistants.*Special
assistants.

11. Such special assistants in mechanical or industrial departments of day high schools may be appointed as the superintendent may deem necessary, subject to the approval of the Board.

Clerical
assistants.

12. Clerical assistants in Latin and day high schools may be appointed as follows:

(a.) One for each school.

(b.) Two when the number of pupils in a school reaches fifteen hundred.

Bookkeeper.

13. One bookkeeper may be appointed in a day high school in which a commercial product is produced which entails bookkeeping accounts.

DEPARTMENT OF PHYSICAL TRAINING.

Ranks of
teachers.

SECT. 294. 1. Teachers of physical training in Latin and day high schools shall be instructors and assistant instructors.

2. They shall be appointed to the Normal, Latin and day high schools to serve under the general supervision of the director of physical training.

Number of
teachers.

3. One teacher of physical training may be appointed to the Normal School, and the number of such teachers for Latin and day high schools shall be determined in accordance with the pupil hour standards established in section 293.

Assigned to
serve as
supervisors in
day intermedi-
ate and day
elementary
schools.

4. Teachers of physical training in Latin and day high schools shall also serve as supervisors of physical training in day intermediate and day elementary schools to which they may be assigned by the director of physical training.

BOSTON NORMAL SCHOOL.

Ranks of
teachers.

SECT. 295. 1. Teachers in the Normal School shall consist of a principal holding the rank of head master, masters who shall be heads of departments and of whom one shall be director of the Model School, junior-masters, first assistants who shall be heads of departments, and assistants.

2. There shall be as many teachers of subordinate ranks as the Board shall authorize on the recommendation of the superintendent. Number of teachers.

3. One clerical assistant may be appointed. Clerical assistant.

EVENING SCHOOLS.

SECT. 296. 1. When the appointment of a teacher in evening schools is under consideration, the number of pupils in average attendance for the month preceding the date on which the appointment is made shall be used as the basis upon which to determine the number and rank of teachers to which a school is entitled. Basis for determining number and ranks of teachers.

Evening Elementary Schools.

2. Teachers in evening elementary schools shall consist of a principal, first assistants and assistants. There shall be one assistant for every twenty pupils in Division A classes, and one assistant for every fifteen pupils in Division B and Division C classes. An additional assistant may be appointed for an excess of fifteen pupils in Division A classes. An additional assistant may be appointed when the number of pupils exceeds four hundred. Ranks and number of teachers.

3. One male first assistant may be appointed in schools of more than two hundred fifty pupils. One clerical assistant may be appointed in schools of more than one hundred fifty pupils. As many interpreters may be appointed as the Board may approve. First assistants, clerical assistants and interpreters.

Evening High Schools.

4. Teachers in evening high schools shall consist of a principal and assistants. There shall be one assistant for every twenty-five pupils. An additional assistant may be appointed for an excess of twenty pupils. An additional assistant may be appointed when the number of pupils exceeds four hundred. Ranks and number of teachers.

5. One typewriting assistant, one laboratory assistant for each class in physics and chemistry, and one clerical assistant in each school may be appointed. Typewriting, laboratory and clerical assistants.

SUMMER REVIEW SCHOOLS.

Ranks of
teachers.

SECT. 297. 1. Teachers of summer review schools shall consist of principals, assistants in charge and assistants.

Number of
teachers.

2. There shall be one principal for each summer review school. In each branch summer review elementary school, one assistant in charge may be appointed.

3. Besides the principal, each summer review high school shall be entitled to one assistant for every twenty pupils in average attendance and an additional assistant for an excess of fifteen pupils.

4. Besides the principal, each summer review elementary school shall be entitled to one assistant for every thirty pupils in average attendance, and an additional assistant for an excess of twenty pupils.

PLAYGROUNDS AND ATHLETICS.

Ranks of
teachers.

SECT. 298. 1. Teachers in playgrounds and teachers of athletics shall consist of teacher coaches, supervisors of playgrounds, play teachers, first assistants in playgrounds, assistants in playgrounds, assistants in sand gardens and teachers of dramatics and story-telling. There shall be as many teachers of these ranks as the Board may authorize.

Emergency
playground
list.

2. A list of substitute playground teachers shall be established annually by the superintendent, with the approval of the Board, to be known as the emergency playground list, from which list assignments of substitute teachers shall be made by the director of physical training.

3. There shall be as many teacher coaches as the Board may authorize.

Eligibility
requirements
for service in
playgrounds.

4. The certificate requirements for teachers in playgrounds are as follows:

(a.) *Supervisors of Playgrounds.*—A special, physical training high school certificate, or a playground certificate with a diploma of graduation from a school in physical education approved by the board of superintendents, and one year's successful experience in conducting a playground;

or, an elementary school, Class B, or a higher certificate, and three years' successful experience in a playground.

(b.) *Play Teachers*.—An elementary school, Class B, or a higher certificate.

(c.) *First Assistants in Playgrounds*.—An elementary school, Class B, or a higher certificate, or a kindergarten certificate, or a special, physical training high school certificate, or membership in the senior class of the Boston Normal School, and at least twelve weeks' successful experience in a playground, which experience shall include service during two different years; or a playground certificate.

(d.) *Assistants in Playgrounds*.—An elementary school, Class B, or a higher certificate, or a kindergarten certificate, or a special, physical training high school certificate, or membership in the junior or the senior class of the Boston Normal School, and at least six weeks' successful experience in a playground; or a playground certificate.

(e.) *Assistants in Sand Gardens*.—A certificate qualifying for service as first assistant or assistant in playgrounds. Pupils in any class of the Boston Normal School are also eligible.

(f.) *Teachers of Dramatics and Story-telling*.—A playground certificate covering the position.

(g.) *Teacher Coaches*.—A certificate qualifying for service in Latin, day high, or day industrial schools. Members of the senior class of the Boston Normal School are also eligible.

SUPERVISING STAFF.

SECT. 299. 1. The supervising staff shall consist of:

Supervising
staff.

1. A director of evening schools.
2. A director of the extended use of the public schools.
3. A director of household science and arts, and one assistant director of household science and arts.
4. A director of kindergartens, and one assistant director of kindergartens.

5. A director of manual arts, one first assistant director of manual arts, three assistant directors of manual arts, one first assistant in manual arts, and eight assistants in manual arts.

6. A director of music, four assistant directors of music, and nine assistants in music.

7. A director of penmanship.

8. A first assistant director of practice and training, and four assistant directors of practice and training.

9. An assistant director of educational investigation and measurement.

10. A director of salesmanship.

11. A director of medical inspection.

12. As many school physicians, to be selected and appointed by the Board, as the Board may authorize.

13. A supervising nurse, and as many school nurses as the Board may authorize.

14. A medical inspector of special classes.

15. A director of physical training.

16. An instructor, and an assistant instructor of military drill.

17. A director of special classes.

18. A director of vocational guidance and as many vocational assistants as the Board may authorize.

*Attendance Officers, Supervisor of Licensed Minors,
and Armorer.*

Attendance
Officers.

SECT. 300. 1. There shall be a chief attendance officer, and as many attendance officers as the Board may authorize, who shall be selected and appointed directly by the Board.

Supervisor of
licensed
minors.

2. There shall be a supervisor of licensed minors, who shall be selected and appointed directly by the Board.

Armorer.

3. There shall be an armorer, who shall be selected and appointed directly by the Board.

CHAPTER XV.

Leaves of Absence of Teachers and Members of Supervising Staff.

SECTION 305. 1. The superintendent may grant leaves of absence to teachers, members of the supervising staff, clerical assistants and bookkeepers for the causes and not to exceed the periods herein set forth:

Conditions under which leaves of absence may be granted.

- (a.) Personal illness (in each school year) 3 months
- (b.) Death in the immediate family 5 days
- (c.) Critical illness in the immediate family (in each school year) 20 days
- (d.) Attendance at the funeral of a teacher or school officer in the employ of the city, or of a principal emeritus 1 day
- (e.) * Service in teachers' institutes held under the direction of state boards of education, or to take part in teachers' associations, or in the case of nurses, similar educational conferences (in each school year) 3 days
- (f.) Court attendance on school business.
- (g.) To visit other schools (in each school year) 2 days
- (h.) To take promotional examinations or examinations for certificates of qualification.

2. When teachers, members of the supervising staff, clerical assistants and bookkeepers are absent on leave for personal illness for a period exceeding fifteen school days, they shall file with the superintendent a satisfactory certificate from a physician stating the nature of the illness.

Physician's certificate required.

SECT. 306. 1. The superintendent may grant, subject to the approval of the Board, leaves of absence to teachers, members of the supervising staff, clerical assistants and bookkeepers for other causes or for longer periods than are enumerated in the preceding section, but continuous leave of absence for more than one year shall not be granted.

Extended leaves of absence.

2. When the absence is for a cause other than that of personal illness, the cause shall be stated by the superintendent in his report of the absence to the Board, and shall appear in the minutes, except when the leave of absence is without pay.

Reasons for leaves of absence to be stated.

* Not to apply to clerical assistants and bookkeepers.

Leaves of
absence for
study, travel,
or for rest.

SECT. 307. 1. The superintendent may grant, subject to the approval of the Board, leaves of absence to teachers and members of the supervising staff, except the supervising nurse, school nurses, medical inspector and school physicians, for study and travel or for rest, for a period not exceeding one year. Teachers and members of the supervising staff become eligible for a leave of absence for study and travel after the completion of seven years of service, and for leave of absence for rest after twenty years of service in the schools of the city of Boston, part of which service may have been rendered in the Parental School. They may be granted leave of absence for study and travel for not more than one year in any eight consecutive years, and for rest for not more than one year in any twenty-one consecutive years. Before such leave may be granted, they shall file with the superintendent an application upon a form prescribed by him, stating the definite purpose for which the leave of absence is desired.

Reports
required from
teachers absent
for study and
travel.

2. Teachers and members of the supervising staff to whom leave of absence for study and travel may be granted, shall regularly report in writing to the superintendent, in such form as he may determine, the manner in which the leave of absence is employed; and for failure to comply with any requirement of this section, or to pursue in a satisfactory manner the purpose for which leave of absence was granted, he may terminate such leave of absence at any time.

Agreement to
be filed by
teachers absent
for study and
travel.

3. Teachers and members of the supervising staff to whom leave of absence is granted under the provisions of this section shall file with the superintendent an agreement in writing, binding them to remain in the service of the Board for three years after the expiration of such leave of absence, or, in case of resignation within said three years, to refund to the Board such proportion of the amount paid them for the time included in the leave of absence as the unexpired portion of said three years may bear to the entire three years. The provisions of this agreement

shall not apply to resignation on account of ill health, with the consent of the Board, nor to resignation at the request of the Board.

4. The provisions of this section shall not apply to teachers in continuation schools or day industrial schools.

Teachers in continuation and day industrial schools exempt.

SECT. 308. 1. Any teacher required to take promotional examinations may be absent for the purpose, and principals shall certify to such absence to the business agent.

Absence to take promotional examinations.

CHAPTER XVI.

Salaries of Teachers and Members of Supervising Staff; Promotional Examinations.

SECTION 310. 1. Annually, and not later than the month of June, the Board shall establish the compensation of teachers, members of the supervising staff, and other persons employed in the schools, with the exception of the supervisor of licensed minors, attendance officers, janitors and matrons, for the year beginning the first day of the following September; and such compensation having been once determined by the Board shall not be changed during that year.

Salaries established annually.

2. The compensation of the supervisor of licensed minors, of attendance officers, janitors, and matrons, having been once established, shall continue until otherwise ordered by the Board.

Compensation to continue until otherwise ordered.

SECT. 311. 1. The compensation of teachers, members of the supervising staff, and other persons employed in the schools shall be established at a fixed rate per annum; at a minimum rate with an annual increase on successive anniversaries until a fixed maximum shall be reached; at a per diem rate for actual service; or otherwise, as the Board may determine.

Rates of compensation.

SECT. 312. 1. The director and other persons employed in the department having charge of the extended use of the schools, and whose compensation is fixed upon an annual basis, shall be required to serve at least two hundred and forty (240)

Service required, department of extended use of public schools.

days per year, and the equivalent of eight hours shall be deemed a day's service.

Compensation and service of teachers, day industrial schools for girls.

SECT. 313. 1. The compensation of teachers employed in day industrial schools for girls, if established at a minimum rate with an annual increase on successive anniversaries until a fixed maximum shall be reached, shall include all service that may be required of them during the regular term, the summer term, and in evening classes of said schools; *provided*, that eight hours shall constitute a full day of teaching service, and no such teacher shall be required to be on duty more than eight hours per day.

Advancement in salary of teachers on succeeding anniversaries.

SECT. 314. 1. Teachers and members of the supervising staff employed in the day schools whose compensation is established at a minimum rate with an annual increase on successive anniversaries until a fixed maximum shall be reached, shall be regularly advanced upon their respective schedules upon succeeding anniversaries of the date upon which they began service, subject to the provisions of the regulations with respect to promotional examinations.

Advancement in salary of teachers on part-time service.

SECT. 315. 1. Teachers appointed for part-time service whose compensation is established at a minimum rate with an annual increase on successive anniversaries until a fixed maximum shall be reached, shall have the dates of their anniversaries advanced so that the amount of service rendered shall be equal to that required of a teacher on full time in a full year between such anniversaries.

Compensation of per diem employees on one-session days.

SECT. 316. 1. In day elementary and day industrial schools, one-session days, the day before Thanksgiving and the second day before Christmas shall be reckoned as full school days in determining the compensation of teachers and members of the supervising staff, aids and student-aids employed in such schools whose compensation is at a per diem rate for actual service.

Compensation of substitutes for less than full day's service.

2. The compensation of substitutes assigned to the day elementary schools for the afternoon session only, shall be paid for one-half day of service. Substitutes assigned for the morning session of

such schools shall be paid for a full day's service if the afternoon session is suspended by order of the Board, or under the regulations. Substitutes assigned for the morning session, whose services are not required for the afternoon session because of the return of the regular teacher, or for some reason other than those stated in this paragraph, shall be paid for one-half day of service.

SECT. 317. 1. Teachers and members of the supervising staff and other employees shall be entitled to receive compensation for their respective positions from the time they enter upon their duties.

Compensation
from date of
beginning of
service.

2. No person shall receive any compensation for services as a teacher or member of the supervising staff who has not been certified by the secretary to the business agent as holding a valid certificate of qualification of the proper grade.

Certification
before
payment.

SECT. 318. 1. The compensation of teachers and members of the supervising staff who retire from the service during the summer vacation, shall cease and their resignations shall take effect as of August 31 next ensuing.

Compensation
of teachers
retiring during
summer vaca-
tion and in
September.

2. Teachers and members of the supervising staff who do not serve the whole of the school year, either because they do not begin on the opening of school in September or those who do not complete the year because of death, resignation, retirement, or discharge, shall be entitled to the same fraction of the salary for the whole year as the ratio of the number of school days while they were in the service is to the whole number of school days between September 1 and August 31, but with the deduction required by the regulations on account of any absence from duty.

Compensation
of teachers
who do not
serve full
year.

3. Teachers and members of the supervising staff who do not resume their duties on the opening day of the term in September, who are not granted leave of absence (1) because of personal illness; (2) because of critical illness or death in the immediate family; (3) to attend the funeral of a teacher or school officer in the employ of the city, or of a principal emeritus; (4) or by order of the Board on recommendation of the

Compensation
of teachers who
do not resume
duties at
beginning of
term.

superintendent, shall be paid during the month in which they return to duty at the rate of one two-hundredth of their annual salaries for each day of service.

Compensation
of teachers
retiring because
of marriage.

4. The compensation of teachers and members of the supervising staff who retire from the service because of marriage, shall cease on the date of marriage; *provided*, that those who marry during the summer vacation shall receive the compensation which would otherwise have been due them to the first day of September in that year.

Credit for
previous service
original
appointments.

SECT. 319. 1. Teachers and members of the supervising staff, except those transferred to a higher rank or grade of schools, shall enter the service upon the minimum salary of their respective ranks; *provided*, that those appointed as assistants and assistants, kindergarten, in the day elementary schools may be allowed one year's credit for more than two and less than four years' previous service; two years' credit for four or more and less than six years' previous service; three years' credit for six or more and less than eight years' previous service; four years' credit for eight or more and less than ten years' previous service; five years' credit for ten or more years' previous service.

Credit for
previous
service
re-entrants
to service.

SECT. 320. 1. Teachers and members of the supervising staff who re-enter the service within a period of six years from the first day of January next following the date of their voluntary retirement, shall be paid in accordance with the provisions of paragraphs 2, 3, 4 and 5 of this section.

2. The salary of each person whose retirement took effect prior to September 1, 1918, shall on the date of such reappointment be fixed at that sum which shall equal the salary received at the time of retirement plus one annual increment, in accordance with the schedule of the rank, and shall be advanced on respective anniversaries by an additional such annual increment until the maximum of the rank is reached; *provided*, that the final increment shall be such an amount as shall place the person on the maximum salary of the rank.

3. The salary of each person whose retirement

takes effect on or subsequent to September 1, 1918, and who, at the time of the retirement, is on any year of the salary schedule of the rank, shall be placed upon that year of service in the rank to which the reappointment may be made, for which the rate of compensation shall be the same as, or shall most closely correspond to, that received at the time of retirement.

4. The salary of each person whose retirement takes effect on or subsequent to September 1, 1918, and who, by the operation of Order 1A of the salary schedule for the year ending August 31, 1919, is not on that year of the salary schedule which corresponds to the term of service, shall be fixed at that sum received at the time of retirement, and shall be advanced on respective anniversaries by one annual increment, in accordance with the schedule of the rank, until the maximum of the rank is reached; *provided*, that the final increment shall be such an amount as shall place the person upon the maximum salary of the rank.

5. In determining the date of the first anniversary of all persons thus reappointed, credit shall be allowed for any fractional part of the final year of service rendered by them under their previous appointment.

SECT. 321. 1. The compensation of any person who may be appointed or elected by promotion as an officer of the Board or as a member of the supervising staff, and who is reappointed to a position of the same or lower rank than that held at the time of such appointment or election, shall be determined as follows: If the reappointment is to a position of the same grade or rank as that previously held, it shall be to the year of service in that rank that was held at the time of appointment to the higher position; if to a position of lower rank, the reappointment shall be to the final or maximum year of service of that rank. In determining the first anniversary of a person reappointed on other than the final or maximum year of service, credit shall be allowed for any fractional part of the final year rendered under the previous appointment.

Credit for
previous service
reappoint-
ments.

Credit for
service under a
license,
Mechanic Arts
High School.

2. Teachers serving under a license in the Mechanic Arts High School shall, when regularly appointed from the eligible list, be credited on the salary schedule with the exact amount of service rendered in said school under a license.

Compensation
when rank is
changed.

SECT. 322. 1. The compensation of teachers whose rank may be changed by the Board upon the recommendation of the superintendent shall be determined as follows: When the rank of any teacher is reduced, such teacher shall receive the salary of the lower rank next lower than the one received in the position of higher rank, but when the rank of any teacher who has been so reduced is subsequently increased in like manner, the salary shall be that to which any previous term of service in the same or in higher rank, or in both, may entitle the person concerned.

Compensation
when appointed
to higher rank
or grade.

SECT. 323. 1. The compensation of a teacher or member of the supervising staff appointed to a position of higher rank or grade or to a rank or grade having a greater maximum salary, whether by promotion or by appointment from the eligible list, shall not be reduced, but such person shall be placed upon that year of service in the new rank or grade for which the compensation is next higher than that received at the time of appointment to the higher position; *provided*, that in the event that such salary during the first year would not be equal to or greater than the compensation received in the former position, such person shall be placed on the next higher year of the schedule of the new rank.

Compensation
when appointed
to lower rank
or grade.

2. A teacher or member of the supervising staff who may be appointed to a position of lower rank or grade, whether by demotion or by appointment from the eligible list, shall be placed upon the year of service in the new rank or grade which will allow credit for any previous permanent service in that or in any higher rank or grade.

No deduction
account certain
absences.

SECT. 324. 1. No deduction shall be made from the salaries of teachers, members of the supervising staff, clerical assistants and bookkeepers who may be granted leave of absence for the reasons and not to exceed the periods herein set forth:

- (a.) Personal illness in the case of directors, principals of day or evening schools (in each school year or term) 3 days
- (b.) Death in immediate family 5 days
- (c.) Attendance at the funeral of a teacher or school officer in the employ of the city, or of a principal emeritus . . 1 day
- (d.) Service in teachers' institutes held under the direction of state boards of education, or to take part in teachers' associations, or in the case of nurses, similar educational conferences (in each school year) . . . 3 days
- (e.) Court attendance on school business.
- (f.) To visit other schools (in each school year) 2 days
- (g.) To take promotional examinations and examinations for certificates of qualification.

Paragraphs (d.), (f.), and (g.) shall not apply to clerical assistants and bookkeepers.

2. The compensation of teachers and members of the supervising staff who have been absent from duty on leave for a full year, and who do not return at the expiration of such year, shall cease, and the business agent shall drop the names of such persons from the pay rolls.

Compensation of teachers absent for full year.

3. Teachers and members of the supervising staff, clerical assistants, bookkeepers, aids and student-aids, absent from duty on leave without pay, or absent without leave, for one year, shall receive no compensation during such period. Those absent from duty on leave without pay, or absent without leave, for a period of less than one year, who die, resign, or retire from the service during or at the end of such period, shall receive no compensation during any part of such period. The compensation of such persons absent from duty on leave without pay, or absent without leave, for a period of less than one year and who return to the service shall be subject to deductions in accordance with paragraph 4 of this section.

Compensation of persons absent on leave and without leave.

4. Except for leaves of absence without loss of pay granted by order of the Board, or under the provisions of paragraph 1 of this section, a deduction shall be made at the following fractional parts of the annual salary of the absentee for each day of absence, and such deduction shall also be made for days on which the regular school sessions may be suspended, when the absence extends over the entire week during which such regular school

Rates of deduction, account of absence.

sessions are suspended; *provided*, that when the total of such deduction exceeds the payment allowed the absentee during any one month, the balance shall be deducted from the amount allowed during any succeeding month.

	One Year's Absence [†] Without Leave, or on Leave Without Pay.	Deduction per Day of Absence Without Pay, or Without Leave.	Deduction per Day on Leave Granted.
Teachers in day schools; members of the supervising staff whose vacations are not expressly defined by the regulations; school physicians; clerical assistants (except in continuation schools) and book-keepers.....	*	† 1-200	† 1-400
School physician assigned to Employment Certifying Office.....	**	1-300	1-600
Clerical assistants in continuation schools.....	**	1-284	1-568
Supervising nurse and school nurses.....	**	1-230	1-460
Director extended use of the public schools.....	*	1-240	1-480

* No compensation allowed.

† In the Boston Trade School, the Trade School for Girls, and the Department of Extended Use of the Public Schools, a period of eight hours is equivalent to a day's service, and a period of four hours is equivalent to a half-day's service.

Promotional Examinations.

Promotional
examinations.

SECT. 325. 1. Two promotional examinations shall be held each year, one in December and one in May, for the purpose of determining the efficiency of teachers in the service. These examinations shall consist of two parts: (1) Success in the school during the preceding year; (2) professional and academic study. Satisfactory pursuit of a college course or courses approved by the board of superintendents, or of a course or courses authorized by and conducted under the direction of the board of superintendents, or of other courses approved by the board of superintendents, may be accepted by said board at its discretion as a substitute for a part of the professional and academic examination.

First pro-
motional
examination.

2. All teachers, except principals and members of the supervising staff, whose compensation is on a sliding scale, with a fixed increase for each successive year of service, must pass a first promotional examination before being placed upon the third year salary of their respective schedules.

3. Teachers who successfully pass the first promotional examination that next precedes the second anniversary of the date upon which they began service, shall be advanced to the third year salary of their respective schedules on the first anniversary of the date on which they were placed on the second year salary of their respective schedules.

Compensation of teachers passing first promotional examination.

4. Teachers who fail to pass successfully a first promotional examination shall remain on the second year salary of their respective schedules for another year and shall then be examined in a similar manner. If they then successfully pass the examination, they shall thereupon be advanced to the third year salary of their respective schedules, and succeeding anniversaries shall be reckoned from the date of taking of such examination. The employment of teachers who fail to pass successfully the aforesaid examination on two successive occasions, shall terminate on the last day of August or of December, whichever next follows the second examination.

Compensation of teachers failing to pass first promotional examination.

5. The board of superintendents, for good cause shown, may permit any teacher to postpone the taking of a first promotional examination; *provided*, that if such deferred examination occurs later than the anniversary of the date on which a teacher began service, succeeding anniversaries shall be reckoned from the date of taking of such examination, if successfully passed, and not from the date of beginning of service. The same rule with respect to re-examination and termination of service shall apply to teachers who defer their first promotional examination as applies to teachers who take such examination at the regular time, except that a teacher who fails to pass such postponed examination shall be required to take the examination next following, and may not defer the second attempt for one year.

Postponed promotional examinations.

SECT. 326. 1. All teachers who are receiving the sixth year salary of their respective schedules shall be required to pass a second promotional examination before being placed upon the seventh year salary of their respective schedules.

Promotional examination required before seventh year salary.

Compensation
of teachers
passing second
promotional
examination.

2. Teachers who successfully pass a second promotional examination shall be placed upon the seventh year salary of their respective schedules on the anniversary of the date on which they were placed on sixth year salary, and shall be regularly advanced on succeeding anniversaries until the maximum salary of their rank or grade is reached.

Compensation
of teachers
failing to
pass second
promotional
examination

3. Teachers who fail to pass a second promotional examination or who do not wish to be thus examined, shall remain on the sixth year salary of their respective schedules until such time as they shall have successfully passed such examination; *provided*, that if the examination is deferred beyond the anniversary of the date on which a teacher was placed on sixth year salary, succeeding anniversaries shall be reckoned from the date of taking of such examination, if successfully passed.

Promotional
examinations of
teachers
promoted.

4. Teachers promoted to a higher rank in schools of the same class shall not be required to pass additional promotional examinations because of such promotion, but shall remain subject to the requirements of the regulations with respect to such examinations, and shall not be advanced in salary more than once (exclusive of the increase granted at the time of promotion) after their original appointment, until they shall have passed successfully a first promotional examination, and shall not be advanced in salary more than five times after their original appointment (inclusive of the increase granted at the time of promotion) until they shall have passed successfully a second promotional examination.

5. Teachers promoted to schools of a different class shall be required to pass two promotional examinations, after said promotion, at the same times and under the same conditions as new teachers appointed to similar positions.

Promotional
examinations of
teachers placed
on advanced
salary at
appointment.

6. Teachers who, on entering the service, are placed on an advanced salary of their respective ranks, shall not be advanced in salary more than once until they shall have passed successfully the first promotional examination, nor be advanced in salary more than five times until they shall have

passed successfully the second promotional examination; *provided*, that no teacher shall be placed upon the maximum salary of his rank until such time as he shall have successfully passed the second promotional examination.

7. Teachers entering the service who have already passed one or both of the prescribed promotional examinations while serving in the Parental School, shall be allowed full credit therefor in the same manner as other teachers whose entire service has been rendered in the public schools of the city of Boston.

Credit for promotional examinations while in Parental School.

8. Teachers whose salaries do not correspond with their years of service but have been regulated by Order 1A of the salary schedule for the year ending August 31, 1919, shall be subject to the provisions of this chapter and be required to take such examinations in the same manner and at the same times as if their salaries had been advanced without having been subjected to the provisions of said order.

Application of Order 1A salary schedule ending Aug. 31, 1919.

SECT. 327. 1. The board of superintendents shall determine the method of estimating a teacher's success in the school, and shall determine the course of professional study. It shall prepare a list of academic subjects from which the teacher may select the one in which he prefers to be examined.

Board of superintendents to determine character and scope of promotional examinations.

2. The board of superintendents shall prepare and distribute information with regard to the time of holding, the character and scope of such examinations, and the relative weight given to each part included therein.

3. The board of superintendents shall issue to each person passing the aforesaid examinations a certificate to that effect.

Board of superintendents to certify successful candidates.

4. The board of superintendents shall certify to the business agent the names of teachers who have successfully passed the aforesaid examinations and the date thereof.

Certification to business agent of successful candidates.

5. Teachers whose original appointment to a permanent position in the day schools either in Boston or in the town of Hyde Park is of an earlier date than September 1, 1906, and who have been

Teachers exempt from promotional examinations.

continuously employed since that date, and teachers thus appointed who have voluntarily retired from Boston service and have been again appointed within a period of six years from the first day of January next following the date of resignation, shall be exempt from the requirements of the regulations with respect to promotional examinations.

CHAPTER XVII.

Courses of Study: Text, Supplementary and Reference Books; Supplies; Certificates and Diplomas, etc.

Preparation and adoption of courses of study.

SECTION 330. 1. The courses of study pursued in the several schools shall be prepared by the superintendent after consultation with the board of superintendents, and submitted to the Board for approval before being put into effect. Any modification of, or deviation from the established courses of study or programs of special studies shall be reported upon, in writing, by the superintendent, after consultation with the board of superintendents, and approved by the Board before adoption.

Introduction and discontinuance of text and supplementary books, etc.

SECT. 331.* 1. No text or supplementary books, dictionaries, cyclopedias, atlases, globes, maps or charts shall be introduced or discontinued for use in the schools except by action of the Board upon the recommendation of the superintendent, after consultation with the board of superintendents.

Approval of books of reference and educational material.

2. Books of reference and educational material used in the schools, except dictionaries, cyclopedias and atlases, shall be approved by the board of superintendents before being placed in the schools.

Approval of requisitions for books, supplies, etc.

3. Requisitions made by principals of schools or districts, or by directors or heads of departments for text, supplementary or reference books

* Revised Laws, chapter 42, section 38. A change may be made in the school books used in the public schools by a vote of two-thirds of the whole school committee at a meeting thereof, notice of such intended change having been given at a previous meeting.

which have been duly authorized, and for supplies and other materials commonly furnished, shall be approved by the assistant superintendents in charge of such schools, or by such director or supervisor as the board of apportionment may determine. Requisitions for supplies and materials not commonly furnished shall be approved by the board of apportionment.

SECT. 332. 1. Teachers and members of the supervising staff shall not permit unauthorized publications to be distributed in the schools or placed in school libraries. They may, however, use such books or cards as they deem desirable for purposes of illustration or for example, but not as text-books, or to the exclusion or neglect of authorized text books.

Unauthorized material.

SECT. 333. 1. No pupil shall be required to furnish himself with any books or other material for school use, except material required in courses in household or manual arts.

Pupils not required to furnish books or other material.

SECT. 334. 1. Books of reference shall not be kept out of school buildings during school hours.

Books of reference not to be kept out of school.

2. Pupils attending the evening elementary schools shall not be permitted to take books belonging to the city from the several school buildings.

Evening school pupils not to take books away from buildings.

SECT. 335. 1. Lessons to be learned out of school shall be such as not to require more than one hour's study by a pupil of good capacity. Lessons to be studied in school shall not be such as to require a pupil of ordinary capacity to study out of school to learn them.

Lessons to be learned out of school.

2. No home study shall be required of pupils in the day elementary schools below the sixth grade.

Home study.

SECT. 336. 1. The regular promotion of pupils in the day elementary schools from grade to grade shall be made annually at the close of the school term in June. Promotions of individual pupils from the kindergarten, or of pupils from grade to grade, or of classes, may be made at any time by the principal of a district, with the approval of the assistant superintendent in charge.

Promotions of classes and individuals.

Certificates and Diplomas.

Certificates of
accomplish-
ment.

SECT. 337. 1. Certificates of accomplishment, signed by the superintendent and by the principal, may be granted by the principal of any day school to pupils when they cease to be members of the public school system.

Certificates of
proficiency in
penmanship.

2. Certificates of proficiency in penmanship, signed by the chairman of the Board and by the director of penmanship, may be granted to pupils in day schools who have satisfactorily completed the course in penmanship.

Athletic
certificates.

3. Certificates, signed by the chairman of the Board and by the principals of the respective schools and districts, may be granted on the recommendation of the director of physical training to successful contestants in athletic events held under the auspices of the Board.

Certificates,
evening
schools.

4. Certificates of proficiency in studies, and certificates of regular and punctual attendance, signed by the superintendent and by the principal, may be granted to deserving pupils in the evening schools at the close of the term.

Diplomas,
day elemen-
tary, day
intermediate
and day
industrial
schools.

5. Diplomas of graduation, signed by the chairman of the Board and by the superintendent, may be granted to pupils in day elementary, day intermediate and day industrial schools who satisfactorily complete the courses of study in those schools.

Diplomas, day
high, Latin
and Normal
schools.

6. Diplomas of graduation, signed by the chairman of the Board and by the superintendent, shall be granted to pupils satisfactorily completing the courses of study in day high, Latin and Normal schools.

Diplomas,
evening
schools.

7. Diplomas of graduation, signed by the superintendent and by the principal, shall be granted to pupils in the evening schools who have satisfactorily completed the course of study.

Military
diplomas.

8. Military diplomas, signed by the chairman of the Board and by the principal of the school, may be granted on the recommendation of the director of physical training to pupils in any day school in which military drill forms a part of the course.

CHAPTER XVIII.

Regulations for Continuation Schools.

SECT. 340. 1. The compulsory continuation school is a day school established under the provisions of chapter 805 of the Acts of 1913, for minors between the ages of fourteen and sixteen years who are working under employment certificates, or who are at home under special home permits.

Definition
of compulsory
continuation
school.

2. The voluntary continuation school is for minors and others over sixteen years of age.

Definition
of voluntary
continuation
school.
Sessions.

SECT. 341. 1. The compulsory and voluntary continuation schools shall have sessions for each class of not less than four hours per week, at such times as shall best serve the interests of the pupils.

2. The sessions of compulsory continuation classes shall begin not earlier than 8 o'clock A. M., and end not later than 5 o'clock P. M. The sessions of the voluntary continuation classes shall begin not earlier than 8 o'clock A. M., and end not later than 6 o'clock P. M.

Hours of
session.

SECT. 342. 1. Schoolrooms shall be open and teachers shall be present at least fifteen minutes before the time for sessions to begin.

Opening of
rooms and
attendance
of teachers.

SECT. 343. 1. Voluntary continuation school courses shall consist of household arts, and short unit courses. Short unit courses shall consist of shoe and leather, dry goods, retail shoe salesmanship, cooking and serving, and such other short unit courses as the Board may approve.

Courses in
voluntary
continuation
school.

SECT. 344. 1. No person who is unable to attend regularly shall be admitted to or permitted to remain in a voluntary continuation school class except by permission of the assistant superintendent in charge.

Attendance
required.

SECT. 345. 1. Pupils sixteen years of age and over may be admitted without examination to the voluntary continuation school. No person who is a non-resident of Boston shall be admitted to the

Admission
requirements.

voluntary continuation school until he has shown the teacher in charge the business agent's receipt for tuition charges.

Absence of pupils.

SECT. 346. 1. Any pupil who shall absent himself from a session of the compulsory continuation school at which his attendance is due, may be required to make up the lost session. The superintendent or his agent authorized in writing may suspend or refuse to grant an employment certificate of such pupil until the lost session, or sessions are made up.

Report of absence of pupil to attendance officer.

2. Any pupil who shall absent himself from a session of the compulsory continuation school at which his attendance is required shall be reported by the principal to the chief attendance officer, unless in the opinion of said principal such absence was excusable.

Suspension of pupils.

SECT. 347. 1. A pupil who is guilty of disobedience or improper conduct may be suspended by the principal, who shall immediately report such suspension to the assistant superintendent in charge. In case a pupil who is under suspension shall not have been reinstated by the assistant superintendent within fourteen days after the date of such suspension, the matter shall be reported to the superintendent who may then revoke the employment certificate of such pupil.

Attendance of pupils during unemployment.

SECT. 348. 1. Any pupil who is temporarily unemployed is required to attend the compulsory continuation school on his regularly assigned sessions, and in addition to report at the school as directed by the principal. Any pupil who fails to carry out this regulation shall be reported to the chief attendance officer.

Exemption of Boston public school pupils from attendance while employed.

SECT. 349. 1. Pupils of other Boston public schools who secure employment during the vacation of said schools or who secure employment for the purpose of practice and experience in connection with their day school course, shall be considered as pupils of such schools, and shall be exempt from attendance upon the compulsory continuation school; *provided*, that such pupils present a written statement of such membership from their principal at the time employment certificates are secured.

SECT. 350. 1. Teachers and other employees shall consist of a principal; heads of divisions; division foremen; shop foremen; shop instructors; trade assistants; helpers; instructors, boys' classes; assistants; vocational assistants; special instructors; special assistants; aids; clerical assistants; and toolkeepers.

Ranks of teachers and other employees.

SECT. 351. 1. Teachers and other employees, except clerical assistants, who may be appointed at any time, shall be appointed in June of each year, and at such other times as the needs of the service require.

Time of appointment of teachers and other employees.

SECT. 352. 1. Besides the principal, the compulsory continuation school shall be entitled to a head of division for each division or large group of pupils whose occupations and aims are closely allied; but in general, not more than fifteen hundred pupils shall be assigned to one division. There shall be not more than three heads of divisions.

Appointments of heads of divisions.

2. There shall be one division foreman; shop foreman; shop instructor; trade assistant; helper; instructor, boys' classes; assistant; vocational assistant; special instructor, or special assistant, for each group of pupils representing three hundred pupil hours of instruction per week. A teacher serving on part time shall not be counted as equivalent to a teacher serving on full time.

Number of teachers authorized.

3. The compulsory continuation school shall be entitled to one clerical assistant for every one thousand pupils in average membership, and an additional clerical assistant for an excess of five hundred pupils.

Clerical assistants.

4. There shall be as many toolkeepers and aids as the superintendent may appoint subject to the approval of the Board, for a period not extending beyond the last day of June next following their appointment. The total number of toolkeepers and aids shall not exceed the total number of trade teachers.

Toolkeepers and aids.

SECT. 353. 1. Clerical assistants employed in the compulsory continuation school shall be allowed the holidays specified for the day schools; and in addition thereto, during the vacation periods of the day schools shall be allowed not less than three

Holidays for clerical assistants.

week's vacation in each calendar year to be taken at such time or times as the principal shall determine.

Follow-up
work by
teachers.

SECT. 354. 1. Continuation school teachers, in addition to their periods of instruction, shall perform such follow-up work both in their pupils' places of employment and in their pupils' homes, as is required by the principal, but the hours of service per week shall at least meet the standards of requirements set up by the State Board of Education for state-aided schools.

Attendance of
teachers
required.

SECT. 355. 1. The principal may require the attendance of teachers on a day preceding the opening of schools in September, and may also require their attendance after the close of the regular sessions in June, for assistance in the completion of records.

Return of
teachers to
regular day
school service.

SECT. 356. 1. Teachers regularly employed in day service at the time of their appointment to continuation school service, and those at present in continuation school service, who were on tenure in the regular day schools at the time of their appointment, shall be returned to their former rank in the regular day school service whenever they fail to secure the approval of the State Board of Education in continuation school work, at the salary to which they would then be entitled had they remained in day school service; and may be returned on their own application. Teachers in continuation school service prior to September 1, 1913, who were on the eligible list when appointed, shall be transferred to the regular day service with the rank of assistant, elementary school, whenever they shall fail to secure the approval of the State Board of Education in continuation school work, at the salary most nearly corresponding to that which they are then receiving, but not to exceed the maximum of the rank.

Certificates of
proficiency.

SECT. 357. 1. Certificates of proficiency signed by the principal and by the superintendent may be awarded to deserving pupils in the continuation school after the close of the period of such pupils' attendance.

2. Pupils in the compulsory continuation school

shall be granted certificates of proficiency after attaining the age of sixteen years; *provided*, that said pupils have maintained satisfactory standards of conduct and accomplishment both in the school and in employment; and *provided further*, that said pupils have been in attendance at the compulsory continuation school for at least one hundred and forty hours. These certificates shall be granted each year on dates determined by the principal.

3. Pupils in the voluntary continuation school shall be granted certificates of proficiency; *provided*, that said pupils have maintained satisfactory standards of conduct and accomplishment both in the school and in employment; and *provided further*, that said pupils have been in attendance at least three-fourths of the full number of sessions in the course for which they enroll. These certificates shall be granted each year on dates determined by the principal.

CHAPTER XIX.

Duties of Attendance Officers and Supervisor of Licensed Minors.

SECT. 360. 1. Attendance officers shall perform their duties under the immediate direction of the chief attendance officer and the general supervision and control of the superintendent.

Direction and supervision of attendance officers.

SECT. 361. 1. The chief attendance officer shall be responsible to the superintendent for the efficiency of the attendance officer force, and the assignments and faithful performance of the work of each officer.

General duties of chief.

2. He shall cause to be investigated, and shall report upon all cases which may be referred to him, in writing, by the Board, or any sub-committee thereof, the superintendent, an assistant superintendent, or a principal.

Investigate and report cases referred.

3. He shall keep a record of the doings of his subordinates, a file of their reports, and of his own; a full and complete record of all cases of children

Records and reports.

investigated or in any way acted upon by him, or by his subordinates; and such other records as may be required by the Board or by the superintendent.

4. He shall, not later than the third day of each month, except August and September, transmit to the superintendent a full report of the doings of his department, and of the absence of any officer and the reasons therefor.

Investigate charges against subordinates.

5. He shall investigate any charges made against any officer and shall report thereon, in writing, to the superintendent.

Reprimand or suspend subordinates.

6. He may, with the approval of the superintendent, reprimand, or suspend with or without pay, for a period not exceeding ten days, any officer for due cause, and shall report such action, in writing, through the superintendent to the Board for approval, with his reasons therefor.

Report negligence or inefficiency of subordinates.

7. He shall keep himself thoroughly informed of all the details of his department, including especially the manner in which each of his subordinates performs the duties assigned him, and shall report any instances of negligence or inefficiency on their part promptly, in writing, to the superintendent.

Certifications to business agent.

8. He shall certify to the service of the attendance officers to the business agent monthly on such forms as may be provided and at such times as may be required by the business agent.

Office hours of subordinates.

9. He shall designate a school building in each attendance officer's district at which the officer assigned thereto shall be in attendance each day between the hours of 8.30 and 9 o'clock A. M., for the purpose of consulting with parents and others. He shall inform the superintendent, the secretary of the Board, and the principals concerned of such designations.

Time required to be devoted to duties; vacation.

10. He shall be subject to all the provisions of sections 362, 363, and 364 of this chapter in respect of leaves of absence, deductions on account of absence from duty, time required in the performance of duties, and vacation period; *provided*, that the authority to grant leaves of absence to attendance officers vested in the chief attendance officer shall in his case be exercised by the superintendent.

11. He shall keep his office open and be in attendance daily from 4 to 5 o'clock P. M., Saturdays, Sundays, legal holidays and vacations excepted. Office hours.

12. He shall hold meetings with his subordinates every Tuesday at 4.30 o'clock P. M., except during July and August; shall keep a record of the officers present and absent at such meetings and of the proceedings. Meetings.

SECT. 362. 1. The chief attendance officer may grant leaves of absence to attendance officers for the causes and not to exceed the periods herein set forth: Leaves of absence.

- (a.) Personal illness (in each school year) 3 months
- (b.) Death in the immediate family 5 days
- (c.) Critical illness in the immediate family (in each school year) 20 days
- (d.) Attendance at the funeral of a teacher or school officer or attendance officer in the employ of the city, or of a principal emeritus 1 day
- (e.) Court attendance on school business.

2. When attendance officers are absent on leave for personal illness for a period exceeding fifteen days they shall file with the chief attendance officer a satisfactory certificate from a physician stating the nature of the illness. Physician's certificate required.

3. The chief attendance officer may grant, subject to the approval of the Board, leaves of absence to attendance officers for other causes or for longer periods than are enumerated in paragraph 1 of this section, but continuous leave of absence for more than one year shall not be granted, and any attendance officer failing to return at the expiration of that time shall resign or be honorably discharged from the service. Extended leaves of absence.

4. The chief attendance officer shall state the cause for which the leave of absence is granted, in his report to the Board, and such cause shall be printed in the minutes, except when the leave of absence is for personal illness or when the leave of absence is without pay. Reasons for leaves of absence to be stated.

5. The chief attendance officer may appoint a substitute for an officer absent from duty for a period not exceeding ten days, and shall report any absence for a period longer than ten days to the Board. Appointment of substitutes.

Deductions
for absences.

SECT. 363. 1. The salaries of attendance officers absent from duty on leave granted by the chief attendance officer under the provisions of section 362 of this chapter

(a.) Because of death in the immediate family of the attendance officer for not more than five days.

(b.) Attendance at the funeral of a teacher or school officer or attendance officer in the employ of the city, or of a principal emeritus for not more than one day.

(c.) Court attendance on school business.

shall be subject to no deduction for the period of absence.

2. The salaries of attendance officers absent from duty on leave for reasons other than those set forth in paragraph 1 of this section, or for periods in excess of those therein set forth, shall be subject to a deduction of one five-hundredth of the annual salary of the absentee for each day of absence.

3. The salaries of attendance officers absent without leave or absent on leave without pay shall be subject to a deduction of one two-hundred-fiftieth of the annual salary of the absentee for each day of absence.

General duties
of officers.

SECT. 364. 1. Attendance officers shall make themselves thoroughly familiar with all laws relating to the school attendance and employment of minors, and all regulations established for their own guidance, faithfully observe them, and the instructions of the chief attendance officer.

Time required
to be devoted
to duties;
vacation.

2. They shall devote such time as may be necessary properly to perform the service required of them by the regulations or by the chief attendance officer on all days throughout the year with the exception of Sundays and legal holidays; *provided*, that no officer shall be required to render more than forty-eight hours of service in any one week; and *provided further*, that each attendance officer shall be entitled to eight weeks' vacation to be taken at such time or times as the chief attendance officer may determine.

Enforce school
attendance.

SECT. 365. 1. It shall be the duty of the attendance officers to see that all children residing

in the city, between seven and fourteen years of age, and all children so residing and under the age of sixteen years who cannot read at sight and write legibly simple sentences in the English language, attend some public day school during the entire time such schools are in session, subject to such exceptions with regard to such attendance as the law provides.

2. They shall endeavor, by persuasion and argument, both with children and with their parents and guardians, and by other means than legal compulsion, to secure the observance of the school attendance laws, visiting children at their homes or places of employment, and looking after them in the streets for this purpose. Failing by such means to secure the required school attendance of any child, or if any child shall be deemed an habitual school offender, the officer concerned shall file with the chief attendance officer a written statement giving the name, age and residence of the child, the names of the parents or guardians of such child, the name of the school attended and the name of the teacher, together with a brief history of the case. Thereupon, the chief attendance officer shall report the same to the assistant superintendent in charge of the attendance department who shall consider the advisability of placing such child in a disciplinary school, and may, if such action be deemed advisable, authorize the chief attendance officer to make such transfer. In the case of any child violating the rules and regulations of a disciplinary school, the chief attendance officer shall confer with the assistant superintendent in charge of the attendance department who may, in his discretion, authorize the chief attendance officer to begin legal proceedings against such child.

3. In each case of an habitual school offender, the assistant superintendent in charge of the school which such child attends, together with the principal of the school or district, shall consider the advisability of placing such child in a disciplinary school, and if such action be deemed not advisable,

Procedure in
securing school
attendance.

Habitual
school
offenders.

the assistant superintendent may, in his discretion, authorize the chief attendance officer to begin legal proceedings against such child.

Illegal employment of minors.

SECT. 366. 1. Attendance officers shall give special attention to cases of illegal employment of minors, and to the duties imposed by chapters 779 and 831 of the Acts of 1913, and shall use their utmost diligence to prevent the employment in factories, workshops or mercantile establishments of any children who have not complied with the requirements of law as to school attendance.

Evening school attendance of minors.

2. They shall also pay particular attention to the employment of minors who are required by law to attend the evening schools as a condition of their employment, and use their best efforts to ensure the observance of the law relating to such attendance.

Reports to principals.

SECT. 367. 1. Attendance officers shall, so far as practicable, report to the principals of their respective districts at least once each day. In the absence of the principal, and in schools where it will facilitate the work of the officers, a teacher may be designated by the principal to whom the officers shall report in his stead; but every officer shall report to the principal, in person, at least once each week, and shall collect communications and cards from the several boxes at least once each day.

Other duties.

2. They shall visit the schools, other than the central schools, in their respective districts as frequently as practicable, and shall perform such duties in connection with the Latin, day high, day intermediate, industrial, evening and continuation schools as shall be assigned them by the chief attendance officer.

Occasional absence of pupils or pupils suspended not investigated.

SECT. 368. 1. Attendance officers shall not be employed to inquire into the occasional absence of pupils who are not suspected of truancy, nor to visit those suspended by principals, unless directed so to do by the chief attendance officer.

Premises where communicable diseases exist not visited.

2. They shall not visit premises where communicable diseases are believed to exist, unless absolutely necessary.

3. When the services of attendance officers are required by teachers to inquire into the absence of pupils suspected of truancy, the officers shall take action only in those cases which are reported to them on the regular cards furnished for the purpose. These cards shall be countersigned by the principal of the district, except that a principal may designate one teacher in such school buildings in his district as are located at long distances from the central school, to countersign such cards in his stead.

Act only on cases properly referred.

4. Attendance officers shall investigate all cases properly referred to them, and report thereon promptly. They shall note on the back of all cards the date on which their investigations are completed, and affix their signatures thereto. They shall thereupon return such cards to the respective principals who shall endorse the same and forward them once a week to the chief attendance officer.

Investigate and report cases referred.

5. Attendance officers shall thoroughly acquaint themselves with all cases of neglected children coming to their knowledge in their several districts. When satisfied, after a full investigation and careful consideration, that a case is one in which court proceedings should be taken, they shall proceed to act thereon according to law, and shall at all times co-operate with and assist the court having the case in charge. They shall keep a detailed record of each case and its final disposition, and file the same with the chief attendance officer.

Investigate cases of neglected children.

SECT. 369. 1. Attendance officers shall present to the chief attendance officer at each weekly meeting a full report, in writing, in such form as he shall prescribe, of the duties performed by them during the preceding week, including in such reports all cases of truancy, absentees, neglected children, and violations of law with respect to school attendance and employment of minors which they have investigated, and such other exceptional cases connected directly or indirectly with their duties which have been brought to their attention.

Reports to chief.

Absence from
duty.

2. They shall include in these reports a statement of all absences from duty, with the reasons therefor.

Notify chief of
absences from
duty.

SECT. 370. 1. An attendance officer absent from duty shall cause the chief attendance officer to be notified immediately of the cause of his absence, and its probable duration.

Duties of
supervisor of
licensed minors.

SECT. 371. 1. The supervisor of licensed minors shall, under the general supervision and control of the superintendent, be charged with the enforcement of the regulations governing licensed minors, and shall perform such duties as special attendance officer as may from time to time become necessary. He shall keep a record of his doings, especially of all cases of children investigated or in any way acted upon by him, and shall submit an annual report to the superintendent at such time as the latter may require.

Time required
to be devoted
to duties;
vacation.

2. He shall devote such time as may be necessary properly to perform the service required of him by the regulations or by the superintendent on all days throughout the year with the exception of Sundays and legal holidays; *provided*, that he shall not be required to render more than forty-eight hours of service in any one week; and *provided further*, that he shall be entitled to eight weeks' vacation to be taken at such time or times as the superintendent may determine.

Absence from
duty, and
deductions on
account of
absence.

3. The supervisor of licensed minors shall be subject to the provisions of sections 362 and 363 of this chapter with regard to leaves of absence and deductions on account of absence from duty, with the exception that the authority to grant leaves of absence therein conferred upon the chief attendance officer shall in the case of the supervisor of licensed minors be exercised by the superintendent.

CHAPTER XX.

Minors' Licenses.

Issue of
badges.

SECTION 375. 1. No minor under sixteen years of age shall in any street or public place of the

city of Boston sell, expose or offer for sale any newspapers, magazines, periodicals or any other articles of merchandise of any description, or exercise the trade of bootblack or peddler, or any other trade, or assist any other person in so selling or in exercising any such trade, unless a badge has been issued to him in accordance with the provisions of sections 11, 12, 13, 14 and 15 of chapter 831 of the Acts of 1913. All such badges shall be granted by the superintendent, or a person authorized by him, in writing, to issue employment certificates.

2. Badges shall not be issued to girls, nor to boys who are under twelve years of age.

SECT. 376. 1. The principal of a school or district in which a minor under sixteen years of age is a pupil, shall receive the application of the parent or guardian of such minor or of any responsible citizen of Boston, for a badge for such minor to work at any of the trades or to sell any or all of the articles enumerated in the preceding section, and shall forward to the supervisor of licensed minors, together with a birth certificate of such minor, each application, certifying to said minor's attendance and conduct, provided the attendance is regular and the conduct is fair.

SECT. 377. 1. All badges shall become void at the end of the year during which the minor reaches his sixteenth birthday. The licensee shall return his badge to the principal of the school at which he attends on or before the date on which his badge expires, or before leaving the city, if he is to remove therefrom, or upon discontinuing selling, or assisting in selling, or exercising a street trade.

2. When a badge has been lost, the licensee losing it shall immediately report the loss to the supervisor of licensed minors who, on application of said licensee, may issue a duplicate badge.

3. A charge of 25 cents shall be made for the use of each badge, or of each duplicate badge.

4. Licensed minors shall not sell, lend or give their badges to anyone, or furnish any unlicensed minor with newspapers or other articles to sell.

Applications
for badges.

Expiration and
return of
badges.

Issue of
duplicate
badges.

Charge for
use of
badges.

Minors not to
transfer badges
nor furnish
unlicensed
minors with
articles to sell.

Hours during
which minors
may sell.

SECT. 378. 1. Licensed minors shall not sell newspapers in or on a street car, or during school hours, or before 6 o'clock A. M., or after 8 o'clock P. M., except during the period from April 15 to October 15, when they shall sell no papers before 6 o'clock A. M. nor after 9 o'clock P. M., *provided*, that licensed minors over fourteen years of age and attending a day high school may sell until 9 o'clock P. M. during the entire year.

Sale of news-
papers during
school hours.

2. A minor between fourteen and sixteen years of age may be allowed to sell newspapers during school hours, provided he possesses an employment certificate, and is regularly employed at least six hours per day.

School attend-
ance of licensed
minors.

SECT. 379. 1. Licensed minors shall, so long as they continue to be licensed, attend, during every session thereof, one of the public schools, or a school duly approved by law in the city of Boston.

Licensed
minors to con-
form to laws.

SECT. 380. 1. Licensed minors shall conform to the laws of Massachusetts, the ordinances of the city of Boston, and the regulations of the Board.

Badges worn
in sight.

2. Licensed minors shall not at any time, while so working or selling, fail to wear their badges conspicuously in sight, in such position as may be designated by the supervisor of licensed minors.

Conduct of
minors engaged
in trade.

3. Licensed minors shall not at any time, while engaged in any trade, or selling articles in public places, congregate with other persons, or make any unnecessary noise, or in any way disturb or annoy persons as they pass, or obstruct free passage of any sidewalk, or entrance to any public place.

Violation of
regulations.

4. A minor who violates any of the foregoing provisions of the regulations shall be deprived of his badge, and is liable to a fine.

Suspension and
revocation of
licenses.

SECT. 381. 1. The superintendent may suspend a license for a period not exceeding three months, or he may revoke it.

Forms for
applications,
licenses and
badges.

SECT. 382. 1. Applications, licenses, and badges shall be in such form as may be approved by the superintendent.

CHAPTER XXI.

Regulations for Advisory Committees.

SECTION 385. 1. Advisory committees consisting of not less than six nor more than eighteen members, who shall serve without compensation, may be appointed by the Board for any school or department. How appointed.

2. The term of office of the members of such committees shall expire at the close of the third school year following their respective appointments; *provided*, that when such a committee shall first be appointed, the members thereof shall be divided as equally as may be into classes to serve one, two and three year terms, respectively. Term of office.

SECT. 386. 1. It shall be the duty of advisory committees to visit, inspect and become familiar with the conduct of the schools or departments to which they may be appointed, and to make such suggestions to the Board relating thereto as they shall deem expedient, and in the interests of the community. Duties.

2. They shall make an annual report to the Board, and may at any time submit special reports or recommendations. Reports.

CHAPTER XXII.

Regulations for the Eastburn School Fund.

SECTION 390. 1. The income of the Eastburn School Fund shall be drawn from the city treasury, from time to time, as needed, by the principal of the Normal School, on the order of the business agent, approved by the chairman of the Board. Income, how drawn.

2. The money thus received shall be expended by the principal, with the approval of the superintendent, for the benefit of deserving and indigent pupils attending the Normal School. Expenditure of income.

SECT. 391. 1. The principal of the Normal School shall keep an account of such expenditures, with vouchers, which account shall be open to the Accounts of fund.

inspection of the Board; and a statement of the expenditures shall be filed by him with the business agent on the first days of January and July in each year.

Inspection of
accounts.

SECT. 392. 1. The accounts of the principal shall be inspected semi-annually by the business agent.

CHAPTER XXIII.

Regulations for School Savings Systems.

Authorization.

SECTION 395. 1. Principals who desire to establish and maintain a savings system for the benefit of their pupils may do so under the provisions of chapter 211, Acts of 1911, entitled "An Act to Authorize Savings Banks to Receive Deposits from School Children," or they may recommend to their pupils the postal savings system conducted by the Post Office Department.

General
regulations.

SECT. 396. 1. The following regulations approved by the bank commissioner of Massachusetts shall be applicable to schools, the principals of which shall elect to pursue the plan authorized by chapter 211, Acts of 1911:

1. Any savings bank desiring to receive deposits from the pupils of any school shall, by vote of its trustees, authorize the treasurer to obtain the written consent of the bank commissioner and the School Committee therefor, or any school through its principal or the superintendent of schools may arrange to have a savings bank obtain such consent.

2. No school shall act for more than one savings bank. In case more than one savings bank shall request permission to receive deposits from any one school, the School Committee shall decide which savings bank may act for such school.

3. After any bank has been authorized to act for any school, its rights shall not be revoked except with the written consent of both the School Committee and the bank commissioner.

4. Any pupil may become a depositor in the school savings bank on bringing one cent or more

and depositing with the teacher or principal or representative of the bank.

5. The one receiving the deposit shall enter upon an individual deposit card the name of the pupil making the deposit and the amount thereof, which card shall be returned to the pupil and kept by him or her.

6. The deposit card is the receipt for the deposit. In case of its loss, immediate notice should be given to the teacher or person receiving the deposit. One cent may be charged the pupil for a duplicate deposit card issued in place of one lost.

7. When the deposit has been received from the pupil, it shall be entered by the person making the collection by name, date and amount in a book to be called "Pupils' Ledger."

8. When the last collection of each month has been taken, or each week if desired, the one receiving the deposits from the pupils shall send to the head of the school bank a memorandum of the name of each pupil having a balance and the amount of such balance as shown on the "Pupils' Ledger." The form on which this information is made shall be called the "Monthly Balance Sheet," and shall be used by the head of the school bank or savings bank representative to check up the balance as appears on his "Collector's Ledger," and shall be returned for use the succeeding month.

9. The head of the school bank on receiving the money from the collector shall enter the name of the collector and amount in a book, to be called "Collector's Ledger," which shall also show amounts transferred to individual pass books.

10. The total amount so collected shall be entered on a deposit slip by amount only, and deposited with the savings bank by the head of the school bank, to his credit as trustee. Accompanying the deposit slip shall be a memorandum of those having sufficient balance to be entered upon a pass book, and the total of such amounts shall be entered as a charge against the trustee account.

11. When there has been entered upon the

deposit card the minimum amount on which the savings bank allows interest, the savings bank shall issue a deposit pass book therefor in its usual form, and thereafter, when the sums entered upon said deposit card amount to one dollar or multiples thereof, such deposit shall be entered by the bank upon the pupil's deposit pass book.

12. Collections shall be made once in each school week between October 1 and June 1 of each school year.

13. No sums shall be withdrawn by the pupil except upon the regular bank day by an order in proper form, signed by the pupil and approved by the parent or guardian, or one in charge of the school bank.

14. All deposit pass books shall be kept by the teacher or principal, or one in charge of the bank, in some safe and proper place, but shall be delivered to the pupil at the close of the school year, or as often as may seem best to the one in charge.

15. All books, cards, deposit tickets and blanks are to be furnished by the savings banks.

16. No entries are to be made in the pass book except by the bank officials.

17. No entries are to be made on deposit card except by the teacher or one receiving the deposit.

18. Any interest earnings of the trustee account shall be first charged with expenses of blank forms and then turned over to the head of the school savings bank for such school uses as he may decide.

If the superintendent of schools desires, he may arrange with the savings bank, when mutually satisfactory, to have the work done by its own representative, who will visit the schools once each week and receive all deposits and make all entries, thereby relieving the teachers of all the work.

Where this plan is chosen, the rules and regulations governing the work will be the same as now prevail in the regular routine of the bank, except as they are modified by the provisions of chapter 211, Acts of 1911.

All amounts less than the minimum on which interest is allowed may be carried by the savings bank as a trustee account in the name of the school bank.

CHAPTER XXIV.

Miscellaneous.

SECTION 400. 1. School buildings shall be open to teachers on all school days for school purposes from 8 o'clock A. M. until one hour after the close of the afternoon session; and on not to exceed two Saturdays in each school term, from 9 o'clock A. M. until 12 o'clock noon, on the request of the assistant superintendent in charge. On sweeping days class-rooms shall be vacated in accordance with a schedule approved by the respective principals; the janitor to be permitted to begin sweeping the first room not later than five minutes after the close of the afternoon session in day elementary schools, and not later than 3.30 o'clock P. M. in day high schools; *provided*, that janitors of day high schools may begin to sweep unoccupied class-rooms immediately after the close of the school session. Notice of the time at which any class-room must be vacated shall be given by the janitor by placing a card in such room not later than 2 o'clock P. M. Five minutes before the janitor locks the building and gates at the close of the day's session, he shall sound an alarm on the school gongs, and the building shall be vacated immediately by all persons therein.

Opening,
vacating and
cleaning of
buildings.

SECT. 401. 1. No school building or part of a school building, or school yard, shall be used for other purposes than the regular work of the schools, except by order of the Board, or upon the written application of a responsible person stating the purpose for which such use is desired. Such applications shall be filed with the secretary of the Board who may issue permits in accordance with such applications as he may approve, and may

Use of school
premises for
other than
school work.

cancel such permits at his discretion; and no janitor shall open a school building for other than school use, except by order of the Board, unless such permit shall have been issued.

Advertisements
on school
premises.

SECT. 402. 1. No advertisements shall be read to teachers or pupils nor distributed on school premises, nor be posted on the walls or fences of school estates.

Agents on
school
premises.

2. No agent or other person shall be permitted to enter school premises for the purpose of exhibiting either to teachers or pupils, books or articles offered for sale, or for any commercial purpose; *provided*, that publishers of books and manufacturers of educational material who shall obtain a permit from the office of the superintendent, may visit principals in their respective schools at such times as will not interfere with the regular work of the schools.

Display of
United States
flag.

SECT. 403. 1. Each school-house shall be provided with a United States flag, not less than four feet in length, and with suitable apparatus whereby such flag shall be displayed on the school-house building or grounds every school day when the weather permits, and on the inside of the school-house on other school days. Such flags shall also be displayed on other days designated by the Board.

Products of
schools.

SECT. 404. 1. All products manufactured in the schools from material supplied by the Board, shall be the property of the schools.

APPENDIX.

BOUNDARIES OF SCHOOL DISTRICTS.

NORMAL, LATIN, AND DAY HIGH SCHOOLS.

The Normal School receives pupils from all parts of the city.

The Public Latin and the Girls' Latin Schools receive pupils from all parts of the city.

The Brighton High School receives pupils who reside within the limits of the former town of Brighton.

The Charlestown High School receives pupils who reside within the limits of the former city of Charlestown and those residing in the North End of the city proper.

The Dorchester High School receives pupils who reside within the limits of the former town of Dorchester, except those residing within the limits of the Edward Everett and William E. Russell Districts.

The East Boston High School receives pupils who reside within the limits of East Boston.

The English High and Girls' High Schools receive pupils who reside within the limits of the city proper, and other pupils in the order of application until the seating accommodations of the schools are exhausted.

The High School of Commerce receives pupils from all parts of the city.

The High School of Practical Arts receives pupils from all parts of the city.

The Hyde Park High School receives pupils who reside within the limits of the former towns of Hyde Park and West Roxbury, and those residing within the limits of the Edmund P. Tileston and Gilbert Stuart Districts.

The Mechanic Arts High School receives pupils from all parts of the city.

The Roxbury High School receives girls who reside within the limits of the former city of Roxbury, and those residing within the limits of the former town of Dorchester.

The South Boston High School receives pupils who reside

within the limits of South Boston, and those residing within the limits of the Edward Everett and William E. Russell Districts.

The West Roxbury High School receives pupils who reside within the limits of the former town of West Roxbury.

DAY ELEMENTARY SCHOOL DISTRICTS.

Abraham Lincoln District, for Boys.

Beginning at the junction of Charles and Beacon streets; thence by the centres of Beacon, Tremont, Court, State, Devonshire, Otis, Summer and Chauncy streets, Harrison avenue, Dover street, and by the rear of the westerly side of Berkeley street to the Boston and Albany Railroad; thence by the railroad to Columbus avenue; thence by the centres of Columbus avenue, Park square, and Charles street to the point of beginning.

Abraham Lincoln District, for Girls.

Beginning at the junction of Charles and Beacon streets; thence by the centres of Beacon, Tremont, Court, and State streets to the water; thence by the water to Dover-street bridge; thence by the centre of Dover street and the centre of Harrison avenue to the Boston and Albany Railroad; thence by the railroad to the rear of the easterly side of Emerald street; thence by the rear of the easterly side of Emerald street to the rear of the southerly side of Compton street; thence by the rear of the southerly side of Compton street to the rear of the easterly side of Tremont street; thence by the rear of the easterly side of Tremont street to the rear of the westerly side of Berkeley street; thence by the rear of the westerly side of Berkeley street to the Boston and Albany Railroad; thence by the railroad to Columbus avenue; thence by the centres of Columbus avenue, Park square, and Charles street to the point of beginning.

Agassiz District, for Boys, and Bowditch District, for Girls.

Beginning at the junction of Centre and Paul Gore streets; thence by the centre of Paul Gore street in a direct line to the New York, New Haven and Hartford Railroad; thence by said railroad to a point opposite Cornwall street extended; thence by the centres of Cornwall street, Peter Parley road,

Walnut avenue, Seaver street, Blue Hill avenue, and Canterbury street to Morton street; thence by the centre of Morton street to Forest Hills street; thence by the centre of Forest Hills street to the Arborway; thence by the centre of the Arborway to South street; thence by the rear of the westerly side of South street to Bussey street; thence by the centres of Bussey, Walter, Centre and Allandale streets to the Brookline line; thence by said line to its junction with Chestnut street; thence by the centre of Chestnut street to Perkins street; thence by the centre of Perkins street to Pond View avenue; thence by the centre of Pond View avenue to Halifax street; thence by the centre of Halifax street to South Huntington avenue; thence by the centre of South Huntington avenue to Centre street; thence by the centre of Centre street to the point of beginning.

Bennett District, for Boys and Girls.

Beginning at North Beacon street, at the Watertown bridge; thence by the centre of North Beacon street to Dustin street; thence by the centre of Dustin street to Cambridge street; thence westerly, by the rear of the southerly side of Cambridge street, to Warren street; thence easterly, by the rear of the northerly side of Warren street to Commonwealth avenue; thence by the centre of Commonwealth avenue to Summit avenue; thence southerly, by the rear of the westerly side of Summit avenue, to the Brookline line; thence by the Brookline and Newton lines, and the Charles river, to the point of beginning.

Bigelow District, for Boys.

Beginning on the northerly shore at the centre of Dorchester street; thence by the centres of Dorchester, Old Harbor, Eighth, and E streets, and Old Colony avenue, and centre of D street, across Commonwealth park to the water on the northerly shore; thence by the water to the point of beginning.

Blackinton District, for Boys and Girls.

All that portion of East Boston known as Breed's Island.

Bowditch District, for Girls, and Agassiz District, for Boys.

(See Agassiz District, page 166.)

Bowdoin District, for Girls.

Beginning at the water at the West Boston bridge; thence by the centre of Cambridge street to North Russell street; thence by the centre of North Russell street to Eaton street; thence by the centre of Eaton street to Chambers street; thence by the centre of Chambers street to Green street; thence by the centre of Green street to Lynde street; thence by the centre of Lynde street to Cambridge street; thence by the centre of Cambridge street to Court street; thence by the centre of Court street to Tremont street; thence by the centre of Tremont street to Beacon street; thence by the centre of Beacon street to Joy street; thence by the centre of Joy street to Mt. Vernon street; thence by the rear of the northerly side of Mt. Vernon street to the water; thence by the water to the point of beginning

Bunker Hill District, for Boys and Girls.

Beginning at Mystic river, on the boundary line between Charlestown and Somerville; thence by said line to a point opposite Mill street; thence in a direct line to Mill street; thence by the rear of the northerly side of Mill street to Main street; thence by the centre of Main street to Mead street; thence by both sides of Mead and North Mead streets, including Grant's court, across Medford street to Mystic river; thence by Mystic river to the point of beginning.

Chapman District, for Boys and Girls.

Beginning at Mystic river; thence by a line running easterly across Central square to Bennington street; thence by the centres of Bennington, Brooks, Lexington, and Putnam streets to Chelsea creek; thence by the water to the point of beginning.

Charles Sumner District, for Boys and Girls.

Beginning at the junction of Walk Hill and Harvard streets; thence by the rear of the westerly side of Harvard street to the former boundary line between Hyde Park and Boston; thence by said line to its junction with Poplar street; thence in a northwesterly direction to the junction of High and Washington streets; thence by the centre of Washington street to Rockland street; thence by the centre of Rockland

street to Farrington avenue; thence by the centre of Farrington avenue to Beech street; thence by the centre of Beech street to Kittredge street; thence by the centre of Kittredge street to Metropolitan avenue; thence by the centre of Metropolitan avenue to Washington street; thence by the centre of Washington street to Dudley avenue; thence by the centres of Dudley avenue, Birch and South streets to the Dedham Branch Railroad; thence by said railroad to Archdale road; thence by the rear of the southerly side of Archdale road to the New York, New Haven and Hartford Railroad; thence by Stony Brook to Neponset avenue; thence by the rear of the southerly side of Neponset avenue to Canterbury street; thence by the rear of the westerly side of Canterbury street to Paine street; thence by the centres of Paine and Walk Hill streets to the point of beginning.

Christopher Gibson District, for Boys and Girls.

Beginning at the junction of Quincy street and Columbia road; thence by the centre of Quincy street to Mt. Everett street; thence by the centre of Mt. Everett street to Hamilton street; thence by a direct line to Pilgrim place; thence by the centres of Pilgrim place, Richfield street, Puritan avenue, Wales place, Olney-street place, Olney and Blakeville streets to Bowdoin street; thence by the centre of Bowdoin street to Bullard street; thence by the rear of the northerly side of Bullard street to the junction of Bullard street and Bowdoin avenue; thence by a direct line drawn from said junction to the junction of Vassar and Washington streets; thence by the rear of the easterly side of Washington street to the Midland Division of the New York, New Haven and Hartford Railroad; thence by said railroad to a straight line drawn across said railroad from Vassar to the junction of Greenwood and Harlem streets; thence by said straight line to said junction; thence by the rear of the northerly side of Harlem street to a point on Harlem street made by the intersection of said Harlem street and a straight line projecting Elmo street; thence by said straight projection of Elmo street to Elmo street; thence by the rear of the northerly side of Elmo street to Blue Hill avenue; thence by the centre of Blue Hill avenue to Seaver street; thence by the rear of the southerly side of Seaver street to Normandy street; thence by the rear of the easterly side of Normandy

street to the rear of the southerly side of Intervale street; thence by the rear of the southerly side of Intervale street to Columbia road; thence by the centre of Columbia road to the point of beginning.

Comins District for Boys and Girls.

Beginning at the junction of Ruggles and Halleck streets; thence by the centre of Halleck street to Prentiss street; thence by the centre of Prentiss street to Parker street; thence by the centre of Parker street to Smith street; thence by the centre of Smith street to Phillips street; thence by the centre of Phillips street to Tremont street; thence by the rear of the southerly side of Tremont street to Parker street; thence by the rear of the westerly side of Parker street to Old Heath street; thence by the rear of the southwesterly side of Old Heath street to Centre street; thence by the centre of Centre street to Gardner street; thence by the centre of Gardner street to Roxbury street; thence by the rear of the easterly side of Elmwood street to Linden Park street; thence by the centre of Linden Park street to Hampshire street; thence by the rear of the easterly side of Hampshire street to Ruggles street; thence by the centre of Ruggles street to the point of beginning.

Dearborn District, for Boys and Girls.

Beginning at the junction of Winthrop and Warren streets; thence by the centres of Warren street, Harrison avenue, Northampton street, Hampden street, Dudley street to Blue Hill avenue; thence by the centres of Blue Hill avenue and Winthrop street to the point of beginning.

Dillaway District, for Girls.

Beginning at the junction of Washington and Ruggles streets; thence by the centre of Ruggles street to Hampshire street; thence by the rear of the easterly side of Hampshire street to Linden Park street; thence by the centre of Linden Park street to Elmwood street; thence by the rear of the easterly side of Elmwood street to Roxbury street; thence by the centre of Gardner street to Centre street; thence by the centre of Centre street to Marcella street; thence by both sides of Marcella, Washington, Elmore, and Kensington streets to Bainbridge street; thence by the centre of Bain-

bridge street to Dale street; thence by both sides of Dale street to Regent street; thence by the centre of Regent street to Warren street; thence by the centres of Warren street and Harrison avenue to Eustis street; thence by the centres of Eustis and Washington streets to the point of beginning.

Dudley District, for Boys.

Beginning at the junction of Washington and Ruggles streets; thence by the centre of Ruggles street to Hampshire street; thence by the rear of the easterly side of Hampshire street to Linden Park street; thence by the centre of Linden Park street to Elmwood street; thence by the rear of the easterly side of Elmwood street to Roxbury street; thence by the centre of Gardner street to Centre street; thence by the centre of Centre street to Marcella street; thence by both sides of Marcella, Washington, Elmore, and Kensington streets to Bainbridge street; thence by the centre of Bainbridge street to Dale street; thence by both sides of Dale street to Regent street; thence by the centre of Regent street to Warren street; thence by the centres of Warren street and Harrison avenue to Eustis street; thence by the centres of Eustis and Washington streets to the point of beginning.

Dwight District, for Boys.

Beginning at the east end of Canton street; thence by the centre of Canton street to the Boston and Providence Railroad; thence by said railroad to Camden street; thence by the centre of Camden street to Columbus avenue; thence by the centre of Columbus avenue to Westfield street; thence by the centres of Westfield and Tremont streets to Kendall street; thence by the rear of the northeasterly side of Kendall street to Shawmut avenue; thence by the centre of Shawmut avenue to Woodbury street; thence by the centres of Woodbury and Thorndike streets to Harrison avenue; thence by the centres of Harrison avenue and Northampton street to the former boundary line between Boston and Roxbury; thence by said boundary line to the South Bay; thence by the water to the point of beginning.

Edmund P. Tileston District, for Boys and Girls.

Beginning at the Neponset river at the line of the former town of Hyde Park; thence by the line of the former town of

Hyde Park to Harvard street; thence by the centre of Harvard street to Hazleton street; thence by the rear of the northerly side of Hazleton street to Blue Hill avenue; thence by the centre of Blue Hill avenue to Fessenden street; thence by the centre of Fessenden street to Norfolk street; thence by a straight line to the junction of Delhi street and Woodlawn avenue; thence by the centre of Woodlawn avenue to West Selden street; thence by the centre of West Selden street to Morton street; thence by the rear of the northeasterly side of Morton street to Fairmount street; thence due south to a point on the Neponset river; thence by the Neponset river to the point of beginning.

Edward Everett District, for Boys and Girls.

Beginning at the point where East Cottage street crosses the New England Railroad; thence by the rear of the southerly side of East Cottage street to Edward Everett square; thence by the outside line of Edward Everett square to East Cottage street; thence by the rear of the southerly side of East Cottage street to Dorchester avenue; thence by the rear of the westerly side of Dorchester avenue to Harbor View street; thence by the rear of the southerly side of Harbor View street continued to the water; thence following the shore around Cow Pasture and Savin Hill to the Old Colony Railroad; thence by the Old Colony Railroad to Bay street; thence by the northerly side of Bay street to Dorchester avenue; thence by the centres of Dorchester and Savin Hill avenues to Pleasant street; thence by the centre of Sawyer avenue to Cushing avenue; thence by the centre of Cushing avenue to its junction with Sawyer avenue at the summit of Jones' Hill; thence by a direct line to Glendale street; thence by the centres of Glendale street and Columbia road to Quincy street; thence by the rear of the northerly side of Quincy street to the Midland Division of the New York, New Haven and Hartford Railroad; thence by said railroad to the point of beginning.

Elihu Greenwood District, for Boys and Girls.

Beginning at West street at its junction with the former Boston line; thence in a northerly and easterly direction by said line to the Neponset river; thence by said river to the Milton line; thence by the Milton line to the Neponset

river again; thence by said river to Fairmount avenue; thence by the centre of Fairmount avenue to Davison street; thence by the centre of Davison street to Webster street; thence by the centre of Webster street extended to the Providence Division of the New York, New Haven and Hartford Railroad; thence by the railroad to its junction with West street; thence by the centre of West street to the point of beginning.

Eliot District, for Boys.

Beginning at the water at the end of Haverhill street; thence by the centre of Haverhill street to Washington street; thence by the centre of Washington street to State street; thence by the centre of State street to the water; thence by the water to the point of beginning.

Emerson District, for Boys and Girls.

All that portion of East Boston beginning on the shore of Boston Harbor at the foot of Brooks street; thence by the centre of Brooks street to Lexington street; thence by the centre of Lexington street to Putnam street; thence by the centre of Putnam street to Chelsea creek; thence by the water to a point opposite Shelby street; thence by the centre of Shelby street to Chelsea street; thence by the centre of Chelsea street to Bennington street to a point opposite Island street; thence by the centre of Island street to Wood Island Park.

Everett District, for Girls.

Beginning at the east end of Canton street; thence by the rear of the northerly side of Canton street to the Boston and Providence Railroad; thence by said railroad to Camden street; thence by the centre of Camden street to Columbus avenue; thence by the centre of Columbus avenue to Westfield street; thence by the centres of Westfield and Lenox streets to Sawyer street; thence by the rear of the northeasterly side of Sawyer, Woodbury, and Thorndike streets to Harrison avenue; thence by the centres of Harrison avenue and Northampton street to the former boundary line between Boston and Roxbury; thence by the said boundary line to South Bay; thence by the water to the point of beginning.

Francis Parkman District, for Boys and Girls.

Beginning at the junction of Washington street and the Arborway; thence by the centre of the Arborway to Forest Hills street; thence by the centre of Forest Hills street to Morton street; thence by the centre of Morton street to its junction with Canterbury street; thence by the centre of Canterbury street to Austin street; thence by the centre of Austin street to Harvard street; thence by the rear of the westerly side of Harvard street to Walk Hill street; thence by the centre of Walk Hill and Paine streets to Canterbury street; thence by the rear of the westerly side of Canterbury street to Neponset avenue; thence by the rear of the southerly side of Neponset avenue to Stony Brook; thence by Stony Brook to the New York, New Haven and Hartford Railroad; thence by the rear of the southerly side of Archdale road to the Dedham Branch Railroad; thence by the rear of the westerly side of South street to the Arborway; thence by the centre of the Arborway to the point of beginning.

Franklin District, for Girls.

Beginning at the east end of Canton street; thence by the rear of the northerly side of Canton street to the Boston and Providence Railroad; thence by said railroad to the Boston and Albany Railroad; thence by the latter railroad to Harrison avenue; thence by the centres of Harrison avenue and Dover street to the bridge; thence by the water to the point of beginning.

Frederic W. Lincoln District, for Boys.

Beginning at the centre of Dorchester street on the northern shore; thence by the centre of Dorchester street to Broadway; thence by the centre of Broadway to Emerson street; thence by the centre of Emerson street to L street; thence by the centre of L street to the southern shore; thence by the southern shore to M street; thence by the centre of M street to Fifth street; thence by the centre of Fifth street to O street; thence northerly by the centre of O street to the northern shore.

Gaston District, for Girls.

Beginning at the centre of Dorchester street on the northern shore; thence by the centre of Dorchester street to G

street to the southern shore; thence by the water to the foot of L street; thence by the centre of L street to Seventh street; thence by the centre of Seventh street to M street; thence by the centre of M street to the northern shore; thence by the water to the point of beginning.

George Putnam District, for Boys and Girls.

Beginning at the junction of Washington and Codman Hill streets; thence by the rear of the southerly side of Codman Hill street extended to Dennison street, but excluding both sides of Codman park; thence by the rear of the southerly side of Dennison street to Walnut avenue; thence by the rear of the southerly side of Walnut avenue to Crawford street; thence by the rear of the westerly side of Crawford street to Hollander street; thence by the rear of the southerly side of Hollander street to Humboldt avenue; thence by the rear of the westerly side of Humboldt avenue to Waumbeck street; thence by the rear of the southerly side of Waumbeck street to Warren street; thence by the centre of Warren street to the rear of the southerly side of Intervale street; thence by the rear of the southerly side of Intervale street to Normandy street; thence by the rear of the easterly side of Normandy street to Seaver street; thence by the centres of Seaver street, Walnut avenue, Peter Parley road and Cornwall street extended to the New York, New Haven and Hartford railroad; thence by said railroad to a point opposite Dimock street; thence in a direct line to Dimock street; thence by the rear of the northerly side of Dimock street to Washington street; thence by the centre of Washington street to the point of beginning.

Gilbert Stuart District, for Boys and Girls.

Beginning at a point on the Neponset river due south of the junction of Morton and Fairmount streets; thence northward to said junction; thence by the rear of the northeasterly side of Morton street to Fuller street; thence by the rear of the northerly side of Fuller street to the railroad; thence by said railroad to Van Winkle street; thence by the rear of the northerly side of Van Winkle street to Minot street; thence by the rear of the northerly side of Minot street to Minot park; thence in a direct line to the intersection of Bates road and Beaumont street; thence by the rear of the

northerly side of Beaumont street to Adams street; thence by the rear of the westerly side of Adams street to Minot street; thence westerly by the rear of the northerly side of Minot street to Frederika street; thence by the rear of the easterly side of Frederika street to Codman street; thence by the rear of the northerly side of Codman street to the Shawmut Branch Railroad; thence by said railroad to its junction with the Milton Branch Railroad; thence in a southeasterly direction to the Neponset river; thence by the river to the point of beginning.

Hancock District, for Girls.

Beginning at the water at the end of Haverhill street; thence by the centre of Haverhill street to Washington street; thence by the centre of Washington street to State street; thence by the centre of State street to the water; thence by the water to the point of beginning.

Harvard-Frothingham District, for Boys and Girls.

Beginning at Mystic river, at a point opposite Tufts street; thence in a direct line to Tufts street; thence by the centres of Tufts and Bunker Hill streets to Lexington street; thence by the rear of the westerly side of Lexington street to Monument square; thence across Monument square to the centres of Winthrop and High streets; thence by the rear of the northerly side of High street to Cordis street; thence by the centre of Cordis street to Warren street; thence by the centres of Warren and Main streets to Chapman street; thence by the rear of the southerly side of Chapman street to Prison Point bridge; thence in a southerly direction to the Charles river; thence by the water to the Navy Yard wall; thence by Chelsea street to Mystic river; thence by the water to the point of beginning.

Henry Grew District, for Boys and Girls.

Beginning at West street at its junction with the former Boston line; thence by the centre of West street to the Providence Division of the New York, New Haven and Hartford Railroad; thence by said railroad to a point opposite Webster street extended; thence by the centre of Webster street to Davison street; thence by the centre of Davison

street to Fairmount avenue; thence by the centre of Fairmount avenue to the Neponset river; thence by said river to the Dedham line; thence by the Dedham line to the Boston line; thence by the Boston line to the point of beginning.

Henry L. Pierce District, for Boys and Girls.

Beginning at the point where Centre street crosses the Shawmut Branch Railroad; thence by said railroad to Welles avenue; thence by both sides of Welles avenue to Dorchester avenue; thence by both sides of Dorchester avenue to Wrentham street; thence by the rear of the northerly and easterly sides of Wrentham and Bruce streets to Ashmont street; thence by the centre of Ashmont street to Adams street; thence by the rear of the westerly side of Adams street to Beaumont street; thence by the rear of the northerly side of Beaumont street to the intersection of Bates road and Beaumont street; thence in a direct line to Minot park; thence by the rear of the northerly side of Minot and Van Winkle streets to the Shawmut Branch Railroad; thence by said railroad to Fuller street; thence by the rear of the northerly side of Fuller street to Milton avenue; thence by the rear of the easterly side of Milton avenue and Edson street to Norfolk street; thence by the centre of Norfolk street to Bernard street; thence by the centre of Bernard street to Talbot avenue; thence by the rear of the southerly side of Talbot avenue to Centre street; thence by the rear of the southerly side of Centre street to the Shawmut Branch Railroad; thence by said railroad to the point of beginning.

Hugh O'Brien District, for Boys and Girls.

Beginning at the junction of West Cottage street and Blue Hill avenue; thence by the centres of Blue Hill avenue, Dudley, Hampden and Albany streets to Massachusetts avenue; thence by the centre of Massachusetts avenue to the former boundary line between Boston and Roxbury; thence by said boundary line to the South Bay; thence by water to a point where the former boundary line between South Boston and Dorchester crosses the Midland Division of the New York, New Haven and Hartford Railroad; thence by said railroad to Dudley street; thence by the rear of the south-

erly side of Dudley street to West Cottage street; thence by the rear of the northerly side of West Cottage street to the point of beginning.

Hyde District, for Girls.

Beginning at the junction of Washington and Ruggles streets; thence by the centre of Ruggles street to Halleck street; thence by the centre of Halleck street to Caldwell street; thence by the rear of the southerly side of Caldwell street to Parker street; thence by the rear of the westerly sides of Parker and Hemenway streets to Bryant street; thence by the centre of Hemenway street to Gainsborough street; thence by the rear of the westerly side of Gainsborough street to the Boston and Providence Railroad; thence by the centres of Camden street and Columbus avenue to Westfield street; thence by the centres of Westfield and Lenox streets to Sawyer street; thence by the rear of the northeasterly side of Sawyer, Woodbury and Thorndike streets to Harrison avenue; thence by the centre of Harrison avenue to Eustis street; thence by the centres of Eustis and Washington streets to the point of beginning.

Jefferson District, for Boys and Girls.

Beginning on Huntington avenue at the Brookline line; thence by the centre of Huntington avenue to the rear of the westerly side of Parker Hill avenue; thence by the rear of the westerly and southerly sides of Parker Hill avenue to Parker street; thence by the rear of the westerly side of Parker street to Heath street; thence by the centre of Heath street to Bickford street; thence by the centre of Bickford street to Minden street; thence by the centre of Minden street to Gay Head street; thence by the centre of Gay Head street to Round Hill street; thence by the centre of Round Hill street to Day street; thence by the centre of Day street to Perkins street; thence by the centre of Perkins street to Jamaica-way; thence by Jamaica-way to the point of beginning.

John A. Andrew District, for Boys.

Beginning at Old Harbor bay at the former boundary line between South Boston and Dorchester, and following this line to the South bay; thence by the water in a northerly direction to the extension of D street; thence by the centre of D street,

Old Colony avenue, E, Eighth, and Old Harbor streets to Old Harbor bay; thence by the water to the point of beginning.

John A. Andrew District, for Girls.

Beginning at Old Harbor bay at the former boundary line between South Boston and Dorchester, and following this line to the South bay; thence by the water in a northerly direction to the extension of D street; thence by the centre of D street, Old Colony avenue, E, Ninth, and Old Harbor streets to Old Harbor bay; thence by the water to the point of beginning.

John Cheverus District, for Boys and Girls.

All that portion of East Boston, except Breed's Island, lying easterly of a line beginning at Wood Island Park; thence by the centre of Island street across the Boston and Albany Railroad to Shelby street; thence by the centre of Shelby street to Eagle street; thence by a straight line to Chelsea creek.

John Winthrop District, for Boys and Girls.

Beginning at the junction of Blue Hill avenue and Quincy street; thence by the centre of Blue Hill avenue to West Cottage street; thence by the rear of the northerly side of West Cottage street to Dudley street; thence by the rear of the southerly side of Dudley street to the Midland Division of the New York, New Haven and Hartford Railroad; thence by the said railroad to the rear of the northerly side of Quincy street; thence by the rear of the northerly side of Quincy street to the point of beginning.

Lawrence District, for Boys.

All that part of South Boston west and northwest of the centre of D street.

Lewis District, for Boys and Girls.

Beginning at the junction of Dale and Washington streets; thence by the rear of the easterly side of Dale street to Regent street; thence by the rear of the northerly side of Regent street to Circuit street; thence by the rear of the northerly side of Circuit street to Walnut avenue; thence by the rear of the northerly side of Walnut avenue to

Warren street; thence by the centre of Warren street to Winthrop street; thence by the centres of Winthrop street and Blue Hill avenue to the rear of the southerly side of Savin street; thence by the rear of the southerly side of Savin street to Warren street; thence by the centre of Warren street to Waumbeck street; thence by the rear of the southerly side of Waumbeck street to Humboldt avenue; thence by the rear of the westerly side of Humboldt avenue to Hollander street; thence by the rear of the southerly side of Hollander street to Crawford street; thence by the rear of the westerly side of Crawford street to Walnut avenue; thence by the rear of the southerly side of Walnut avenue to Dennison street; thence by the rear of the southerly side of Dennison street to a point opposite the rear of the southerly side of Codman Hill street; thence in a direct line to the rear of the southerly side of Codman Hill street, including both sides of Codman park; thence by the southerly side of Codman Hill street to Washington street; thence by the centre of Washington street to the point of beginning.

Longfellow District, for Boys and Girls.

Beginning at the junction of Washington and High streets; thence by a line in a northerly direction to the junction of Church and Centre streets; thence by the centre of Church street to the Brookline line; thence by said line to Allandale street; thence by the centres of Allandale, Centre, Walter, Bussey and South streets to the Dedham Branch Railroad; thence by the railroad in a westerly direction to South street again; thence by the centres of South and Birch streets and Dudley avenue to Washington street; thence by the centre of Washington street to Metropolitan avenue; thence by the centre of Metropolitan avenue to Kittredge street; thence by the centre of Kittredge street to Beech street; thence by the centre of Beech street to Farrington avenue; thence by the centre of Farrington avenue to Rockland street; thence by the centre of Rockland street to Washington street; thence by the centre of Washington street to the point of beginning.

Lowell District, for Boys and Girls.

Beginning at the corner of Perkins and Day streets; thence by the centre of Day street to Round Hill street; thence by the centre of Round Hill street to Gay Head street; thence by the centre of Gay Head street to Minden street; thence by

the centre of Minden street to Bickford street; thence by the centre of Bickford street to Heath street; thence by the centre of Heath street to Heath square; thence by the rear of the westerly side of Old Heath street to Centre street; thence by the centre of Centre street to Marcella street; thence by the rear of the westerly side of Marcella street to Washington street; thence by the centre of Washington street to Dimock street; thence by the rear of the northerly side of Dimock street, and by a direct line of Dimock street extended to the Boston and Providence Railroad; thence by said railroad in a direct line to Paul Gore street; thence by the centre of Paul Gore street to Centre street; thence by the centre of Centre street to South Huntington avenue; thence by the centre of South Huntington avenue to Halifax street; thence by the centre of Halifax street to Pond View avenue; thence by the centre of Pond View avenue to Perkins street; thence by the centre of Perkins street to the point of beginning.

Martin District, for Boys and Girls.

Beginning at the junction of Ruggles and Parker streets; thence by the rear of the westerly side of Parker and Hemenway streets to Bryant street; thence by the centre of Bryant street to the Fenway; thence by the centre of the Fenway in a westerly direction to the Brookline boundary line; thence by said boundary line to Huntington avenue; thence by the centre of Huntington avenue to Parker Hill avenue; thence by the rear of the westerly and southerly sides of Parker Hill avenue to Parker street; thence by the rear of the westerly side of Parker street to Tremont street; thence by the rear of the southerly side of Tremont street to Phillips street; thence by the centre of Phillips street to Smith street; thence by the centre of Smith street to Parker street; thence by the centre of Parker street to Prentiss street; thence by the centre of Prentiss street to Halleck street; thence by the centre of Halleck street to the junction of Halleck and Caldwell streets; thence by the rear of the southerly side of Caldwell street to Parker street; thence by the rear of the westerly side of Parker street to the point of beginning.

Mary Hemenway District, for Boys and Girls.

Beginning at the point where the Old Colony Railroad crosses Freeport street near Beach street; thence by the

Old Colony and the Shawmut Branch Railroads to Dickens street; thence by the northerly side of Dickens street to Adams street; thence by the centre of Adams street to Field's Corner; thence by the centre of Dorchester avenue to Charles street; thence by the northerly side of Charles street to a point on the brook west of the end of Charles street; thence in a southeasterly direction to the Shawmut Branch Railroad; thence by said railroad to Welles avenue; thence by the rear of the northerly side of Welles avenue to Dorchester avenue; thence by the rear of the easterly side of Dorchester avenue to Wrentham street; thence by the rear of the northerly and easterly sides of Wrentham and Bruce streets to Ashmont street; thence by the centre of Ashmont to Freeport street; thence by the rear of the westerly side of Freeport street to the water at Commercial-point bridge; thence by the water to the point of beginning.

Mather District, for Boys and Girls.

Beginning at the southern shore of Savin Hill, on the Old Colony Railroad; thence by said railroad to Bay street; thence by the rear of the northerly side of Bay street to Dorchester avenue; thence by the centres of Dorchester and Savin Hill avenues to Pleasant street; thence by the centre of Sawyer avenue to Cushing avenue; thence by the centre of Cushing avenue to its junction with Sawyer avenue at the summit of Jones' Hill; thence by a direct line to Glendale street; thence by the centre of Glendale street and Columbia road to Quincy street; thence by the centre of Quincy street to Mt. Everett street; thence by the centre of Mt. Everett street to Hamilton street; thence by a direct line to Pilgrim place; thence by the centre of Pilgrim place, Richfield street, Puritan avenue, Wales place, Olney-street place, Olney, Blakeville, Bowdoin, and Topliff streets and Geneva avenue to the Shawmut Branch Railroad; thence by said railroad, and by a line in a northwesterly direction to a point on the brook west of the end of Charles street; thence by a direct line to Charles street; thence by the rear of the northerly side of Charles street to Dorchester avenue; thence by the centre of Dorchester avenue to Field's Corner; thence by the centre of Adams street to Dickens street; thence by the rear of the northerly side of Dickens street to the Shawmut Branch Railroad; thence by the Shawmut Branch and Old

Colony Railroads in a northerly direction to the water; thence by the water to the point of beginning.

Minot District, for Boys and Girls.

Beginning at Commercial-point bridge on Freeport street; thence by the westerly side of Freeport street to Ashmont street; thence by the centre of Ashmont street to Adams street; thence by the rear of the westerly side of Adams street to New Minot street; thence by the rear of the northerly side of New Minot street to Frederika street; thence by the rear of the easterly side of Frederika street to Codman street; thence by the rear of the northerly side of Codman street to the Shawmut Branch Railroad; thence by said railroad to its junction with the Milton Branch Railroad; thence in a southeasterly direction to the Neponset river; thence by the water to the point of beginning.

Norcross District, for Girls.

All that part of South Boston lying west and northwest of a line beginning at the centre of E street on the northern shore, and running by the centre of E street, Old Colony avenue, and the extension of D street to the South bay.

Oliver Hazard Perry District, for Boys.

All that part of South Boston lying easterly and southerly of the line beginning at the southern shore at the foot of M street; thence by the center of M street to Fifth street; thence by the centre of Fifth street to O street; thence by the centre of O street to the northern shore.

Oliver Hazard Perry District, for Girls.

All that part of South Boston lying easterly and southerly of the line beginning at the southern shore at the foot of L street; thence by the centre of L street to Seventh street; thence by the centre of Seventh street to M street; thence by the centre of M street to the northern shore.

Oliver Wendell Holmes District, for Boys and Girls.

Beginning on Blue Hill avenue at the rear of the northerly side of Elmo street; thence by the rear of the northerly side of Elmo street to and including 82 Elmo street; thence

in a straight line to and including 54 Fowler street; thence in a straight line to the rear of the northerly side of Harlem street; thence by the rear of the northerly side of Harlem street to Greenwood street; thence by a straight line to the Midland Division of the New York, New Haven and Hartford Railroad; thence by the said railroad to Washington street; thence by the rear of the easterly side of Washington street to Vassar street; thence by a straight line drawn from the junction of Vassar and Washington streets to the junction of Bullard street and Bowdoin avenue; thence by the rear of the northerly side of Bullard street to Bowdoin street; thence by the centre of Bowdoin street to Topliff street; thence by the centre of Topliff street to the centre of Geneva avenue; thence by the centre of Geneva avenue to the Shawmut Branch of the New York, New Haven and Hartford Railroad; thence by the line of the railroad to the rear of the northerly side of Mather street; thence by the rear of the northerly side of Mather and Lyndhurst streets to Washington street; thence by the rear of the easterly side of Washington street to Aspinwall road; thence by the rear of the northerly side of Aspinwall road to Whitfield street; thence by the rear of the easterly side of Whitfield street to Wheatland avenue; thence by the rear of the northerly side of Wheatland avenue to the New York, New Haven and Hartford Railroad; thence by the line of the railroad to Talbot avenue; thence by the rear of the southerly side of Talbot avenue to the westerly side of Harvard street; thence by the rear of the westerly side of Harvard street to Austin street; thence by the centre of Austin street to Canterbury street; thence by the centre of Canterbury street to Blue Hill avenue; thence by the centre of Blue Hill avenue to the point of beginning.

Phillips Brooks District, for Boys and Girls.

Beginning at the junction of Quincy street and Columbia road; thence by the centre of Columbia road to the rear of the southerly side of Intervale street; thence by the rear of the southerly side of Intervale street to Warren street; thence by the centre of Warren street to the rear of the southerly side of Savin street; thence by the rear of the southerly side of Savin street to Blue Hill avenue; thence by the centre of Blue Hill avenue to the rear of the northerly side of Quincy

street; thence by the rear of the northerly side of Quincy street to the point of beginning.

Prescott District, for Boys and Girls.

Beginning at Mystic river at a point opposite Sackville street; thence by a direct line to Sackville street; thence by the rear of the southerly side of Sackville street to Bunker Hill street; thence by the centre of Bunker Hill street to Green street; thence by both sides of Green street to Bartlett street; thence by the rear of the easterly side of Bartlett street to Monument square; thence by Monument square to Lexington street; thence by the rear of the northerly side of Lexington street to Bunker Hill street; thence by the centres of Bunker Hill and Tufts street in a direct line to Mystic river; thence by the water to the point of beginning.

Prince District, for Boys and Girls.

Beginning at the water opposite the foot of Massachusetts avenue; thence by the water to Mt. Vernon street; thence by the rear of the northerly side of Mt. Vernon street to Joy street; thence by the centre of Joy street to Beacon street; thence by the centre of Beacon street to Charles street; thence by the centres of Charles street, Park square and Columbus avenue to the Boston and Albany Railroad; thence by said railroad to the Boston and Providence Railroad; thence by the Boston and Providence Railroad to Gainsborough street; thence by the rear of the westerly side of Gainsborough street to Hemenway street; thence by the centre of Hemenway street to Bryant street; thence by the centre of Bryant street to the Fenway; thence by the centre of the Fenway in a westerly direction to the Brookline boundary line; thence by said boundary line to Commonwealth avenue; thence by both sides of Commonwealth avenue to Essex street; thence by the centre of Essex street to Essex-street bridge; thence by the bridge to the water; thence by the water to the point of beginning.

Quincy District, for Boys.

Beginning at the Dover-street bridge; thence by the centres of Dover street, Harrison avenue, Chauncy, Summer,

Otis, Devonshire and State streets to the water; thence by the water to the point of beginning.

Rice District, for Boys and Girls.

Beginning at the east end of Canton street; thence by the centre of Canton street to the Boston and Providence Railroad; thence by said railroad to the Boston and Albany Railroad; thence by the latter railroad to Berkeley street; thence by the centres of Berkeley and Dover streets to Dover-street bridge; thence by the water to the point of beginning.

Robert G. Shaw District, for Boys and Girls.

Beginning at the junction of Poplar street with Hyde Park boundary line; thence in a northwesterly direction to the junction of High and Washington streets; thence by the centre of the West Roxbury Parkway to Church street; thence by the centre of Church street to the Brookline line; thence by the Brookline and Newton lines to Charles river; thence by Charles river to the Dedham line; thence by the Dedham line to the Hyde Park line; thence by the Hyde Park line to the point of beginning.

Roger Wolcott District, for Boys and Girls.

Beginning at the junction of Harvard and Hazleton streets; thence by the centre of Harvard street to Talbot avenue; thence by the rear of the southerly side of Talbot avenue to Bernard street; thence by the centre of Bernard street to Norfolk street; thence by the rear of the easterly side of Edson street and Milton avenue to the rear of the northerly side of Fuller street; thence to the rear of Morton street; thence to the junction of Selden and Morton streets; thence by the line of the Gilbert Stuart District to the line of the Edmund P. Tileston District; thence by the northerly line of the Edmund P. Tileston District to West Selden street; thence by the centre of Woodlawn avenue to Delhi street; thence in a straight line to the junction of Fessenden and Norfolk streets; thence by the centre of Fessenden street to Blue Hill avenue; thence by the centre of Blue Hill avenue to Hazleton street; thence by the rear of the northerly side of Hazleton street to the point of beginning.

Samuel Adams District, for Boys and Girls.

Beginning at the junction of Brooks street and the railroad; thence by the railroad to Cunard wharf; thence by the water to Brooks street extended; thence by the centre of Brooks street extended to the point of beginning.

Sherwin District, for Boys.

Beginning at the junction of Washington and Ruggles streets; thence by the centre of Ruggles street to Halleck street; thence by the centre of Halleck street to Caldwell street; thence by the rear of the southerly side of Caldwell street to Parker street; thence by the rear of the westerly sides of Parker and Hemenway streets to Bryant street; thence by the centre of Hemenway street to Gainsborough street; thence by the rear of the westerly side of Gainsborough street to the Boston and Providence Railroad; thence by the centres of Camden street and Columbus avenue to Westfield street; thence by the centres of Westfield and Tremont streets to Kendall street; thence by the rear of the northeasterly side of Kendall street to Shawmut avenue; thence by the centre of Shawmut avenue to Woodbury street; thence by the centres of Woodbury and Thorndike streets to Harrison avenue; thence by the centre of Harrison avenue to Eustis street; thence by the centres of Eustis and Washington streets to the point of beginning.

Shurtleff District, for Girls.

Beginning at the centre of Dorchester street on the northern shore; thence by the centres of Dorchester and G streets to the water on the southern shore; thence by the water to Old Harbor street; thence by the centres of Old Harbor, Ninth and E streets to the water on the northern shore; thence by the water to the point of beginning.

Theodore Lyman District, for Boys and Girls.

Beginning at Cunard wharf and running by the railroad to the rear of the southerly side of Porter street; thence by the rear of the southerly side of Porter street to Central square; thence by a line running westerly across Central square to the Mystic river; thence by the water to the point of beginning.

Thomas Gardner District, for Boys and Girls.

Beginning at North Beacon street at the Watertown bridge; thence by the centre of North Beacon street to the easterly side of Market street; thence by the easterly side of Market street to the Boston and Albany Railroad; thence by the southerly side of said railroad to Cambridge street; thence by the rear of the northerly side of Cambridge street to Mansfield street; thence by the rear of the westerly side of Mansfield street to Coolidge street; thence by the rear of the northerly side of Coolidge street to North Harvard street; thence by a line running easterly to a point on the Charles river midway between Cambridge street and Western avenue; thence by the Charles river to the point of beginning.

Thomas N. Hart District, for Boys.

Beginning at the junction of Dorchester street and Broadway; thence by the centre of Broadway to Emerson street; thence by the centre of Emerson street to L street to the water on the southern shore; thence by the water to Old Harbor street; thence by the centres of Old Harbor street and Dorchester street to the point of beginning.

Ulysses S. Grant District, for Boys and Girls.

Beginning at the junction of Brooks street and the railroad; thence by the centre of Brooks street to its junction with Bennington street; thence by the centre of Bennington street to the southerly side of Porter street; thence by the rear of the southerly side of Porter street to the railroad; thence by the railroad to the point of beginning.

Warren District, for Boys and Girls.

Beginning at Prison Point bridge; thence by the centre of Austin street to Chapman street; thence by the rear of the southerly side of Chapman street to Main street; thence by the centres of Main and Warren streets to Cordis street; thence by the centre of Cordis street to High street; thence by the centre of High street to Monument square; thence by Monument square to Bartlett street; thence by the rear of the easterly side of Bartlett street to Green street; thence by the rear of the northerly side of Green street to Bunker Hill street, including Badger place; thence by the centre of Bunker

Hill street to Sackville street; thence by the rear of the southerly side of Sackville street in a direct line to the water; thence by the water to a point opposite North Mead street extended; thence by the southerly side of North Mead street, excluding Grant's court, to Bunker Hill street; thence by the centre of Bunker Hill street and the rear of the southerly side of Mead street to Main street; thence by the centre of Main street to a point opposite Mill street; thence by the rear of the northerly side of Mill street to Rutherford avenue; thence by the centre of Rutherford avenue to Chapman street; thence by the rear of the southerly side of Chapman street to Austin street; thence by the centre of Austin street to the point of beginning.

Washington District, for Boys and Girls.

Beginning at the water at the lower end of Haverhill street; thence by the centre of Haverhill street to Washington street; thence by the centre of Washington street to Court street; thence by the centre of Court street to Cambridge street at Bowdoin square; thence by the centre of Cambridge street to Lynde street; thence by the centre of Lynde street to Leverett street; thence by the centre of Leverett street to the water; thence by the water to the point of beginning.

Washington Allston District, for Boys and Girls.

Beginning at the point where Market street crosses the Boston and Albany Railroad; thence by the rear of the easterly side of Market street to North Beacon street; thence by the centre of North Beacon street to Dustin street; thence by the centre of Dustin street to Cambridge street; thence westerly by the rear of the southerly side of Cambridge street to Warren street; thence easterly by the rear of the northerly side of Warren street to Commonwealth avenue; thence by the centre of Commonwealth avenue to Summit avenue; thence by the rear of the westerly side of Summit avenue to the Brookline line; thence by the Brookline line to the Brookline bridge; thence by the Charles river to a point midway between Cambridge street and Western avenue; thence by a line running westerly to Coolidge street, crossing North Harvard street; thence by the rear of the northerly side of Coolidge street to Mansfield street;

thence by the rear of the westerly side of Mansfield street to Cambridge street; thence by the rear of the northerly side of Cambridge street to the Boston and Albany Railroad; thence by the southerly side of said railroad to the point of beginning.

Wells District, for Girls.

Beginning at the water at the West Boston bridge; thence by the water to Craigie's bridge; thence by the centre of Leverett street to Green street; thence by the centre of Green street to Chambers street; thence by the centre of Chambers street to Eaton street; thence by the centre of Eaton street to North Russell street; thence by the centre of North Russell street to Cambridge street; thence by the centre of Cambridge street to the point of beginning.

Wendell Phillips District, for Boys.

Beginning at the water at the end of Craigie's bridge; thence by the centre of Leverett street to Lynde street; thence by the centre of Lynde street to Cambridge street; thence by the centre of Cambridge street to Court street; thence by the centre of Court street to Tremont street; thence by the centre of Tremont street to Beacon street; thence by the centre of Beacon street to Joy street; thence by the centre of Joy street to Mt. Vernon street; thence by the rear of the northerly side of Mt. Vernon street to the water; thence by the water to the point of beginning.

William E. Russell District, for Boys and Girls.

Beginning at the point where the old New England Railroad crosses East Cottage street; thence by the rear of the southerly side of East Cottage street to Edward Everett square; thence by the outside line of Edward Everett square to East Cottage street; thence by the rear of the southerly side of East Cottage street to Dorchester avenue; thence by the rear of the westerly side of Dorchester avenue to Harbor View street; thence by the rear of the southerly side of Harbor View street continued to the water; thence by the water to the former boundary line between South Boston and Dorchester; thence by said boundary line to the South bay; thence by the water to the old New England Railroad; thence by said railroad to the point of beginning.

LAWS RELATING TO THE SCHOOL COMMITTEE.

CHAPTER 241 OF THE ACTS OF 1875.

¹ AN ACT TO REORGANIZE THE SCHOOL COMMITTEE OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The qualified voters of the city of Boston, at the annual municipal election occurring in the year eighteen hundred and seventy-five, shall elect twenty-four persons, inhabitants of the city, to constitute with the mayor of said city, who shall be *ex officio* chairman thereof, the school committee of said city, the members of which shall serve without compensation; the eight persons who shall have received the largest number of votes shall hold their office for three years; the eight persons who shall have received the next largest number of votes shall hold their office for two years; and the eight persons who shall have received the next largest number of votes shall hold their office for one year. In case two or more persons elected shall have received an equal number of votes, those who are the seniors by age shall, for the division into classes hereby required, be classified as if they had received the largest number of votes in the order of ages. And thereafter the qualified voters shall annually elect eight persons, inhabitants of the city, to serve as members of the school committee for the term of three years.

SECT. 2. It shall be the duty of the clerks of the several wards of said city to make returns to the city clerk, after each municipal election, of the votes cast in their several wards for members of the school committee, and after the entry by the city clerk of said returns, or of an abstract thereof, in the official book kept for such purpose, it shall be the duty of the board of aldermen to examine and compare said returns and thereupon to cause certificates of election to be issued to such and so many of the members of said school committee as appear to have been chosen at such election; but said school

¹ See chapter 349, Acts of 1905 [An Act to Reorganize the School Committee of the City of Boston.] See page 208.

² Section 10 of chapter 266 of the Acts of 1885 [An Act to amend the Charter of the City of Boston] provides that "The mayor shall not be a member nor preside at any of the meetings, nor appoint any of the committees of either the Board of Aldermen or of the School Committee."

committee shall be the final judge of the qualifications and elections of its own members.

SECT. 3. The persons so chosen as members of the school committee shall meet and organize on the second Monday in January, in the year eighteen hundred and seventy-six, and annually thereafter, at such time and place as the mayor may appoint. The unexpired term of office of all members and officers of the school committee as hitherto organized and established shall terminate immediately upon the organization of the school committee elected under this act.

[Section 3 amended by chapter 33, Acts of 1886. See, also, chapter 349, Acts of 1905, An Act to Reorganize the School Committee of the City of Boston, page 208.]

SECT. 4. A majority of all the members of the school committee shall be necessary to constitute a quorum for the transaction of business. They shall choose a secretary, not of their own number, who shall also serve as secretary to the board of supervisors, an auditing clerk, and such other subordinate officers as they may deem expedient, and shall define their duties, fix their compensation, and may remove them at pleasure.

[Section 4 repealed by chapter 318, Acts of 1906. See page 213.]

SECT. 5. The school committee shall have the supervision and direction of the public schools, and shall exercise the powers and perform the duties in relation to the care and management of schools which are now exercised and performed by the school committee of said city, except so far as they may be changed or modified by this act, and shall have the powers and discharge the duties which may hereafter be imposed by law upon the school committees of cities and towns. They may elect teachers, and may discharge those now in office, as well as those hereafter elected. They shall appoint janitors for the schoolhouses, fix their compensation, designate their duties, and may discharge them at pleasure. They may fix the compensation of the teachers, but the salaries established at the commencement of each school year shall not be increased during such year.

SECT. 6. Whenever, in the judgment of the school committee, a new building or any addition to or alteration of a building is needed for school purposes, of an estimated cost of over one thousand dollars, they shall make a statement in writing to the city council of the necessity of the proposed building, addition or alteration; and no contract for the

purchase or lease of land, or for the erection, purchase or lease of any building, or for any addition to or alteration of any building for school purposes, shall be authorized by the city council until such statement has been made, nor until the locality and plans for the same have been approved by the school committee or by a sub-committee thereof, duly authorized to approve the same.

[Section 6 amended by chapter 297, Acts of 1889, and by chapter 362, Acts of 1899. See, also, chapter 473, Acts of 1901, An Act to Establish a Schoolhouse Department of the City of Boston, page 201.]

SECT. 7. The school committee shall elect a superintendent of schools and a board of supervisors, consisting of not more than six members, and shall define their duties and fix their compensation. The superintendent and the members of the board of supervisors shall hold office for the term of two years, unless sooner removed; and they may be removed for cause at any time by the school committee. No member of either branch of the city council or of the school committee shall hold the office of superintendent or supervisor, and no member of either branch of the city council shall be a member of the school committee. The superintendent shall be a member of the board of supervisors, and shall, when present, preside at their meetings.

[Section 7 repealed by chapter 231, Acts of 1906. See page 211. See, also, chapter 489, Acts of 1914, page 238.]

SECT. 8. The votes of the majority of the whole number of members of the school committee shall be necessary to elect the superintendent of schools, the supervisors, the head-masters of the Latin, normal and high schools, the masters of the grammar schools, or the director of a special study or exercise.

[*Approved May 19, 1875.*]

[Section 8 repealed by chapter 231, Acts of 1906. See page 211.]

CHAPTER 53 OF THE ACTS OF 1877.

AN ACT TO INCORPORATE THE BOSTON SCHOOL COMMITTEE.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston for the time being, is hereby made a corporation by the name of The School Committee of the City of Boston, and said committee and its successors in office elected according to

law in said city shall continue a body corporate for the purposes hereinafter set forth, with all the powers and privileges and subject to all the duties, restrictions and liabilities set forth in all general laws which now are or may hereafter be in force relating to such corporations.

SECT. 2. Said corporation shall have authority to receive and hold all sums of money, and real and personal estate not exceeding in the aggregate the value of two hundred thousand dollars, which money may be given, granted, bequeathed or devised to it for the benefit of the teachers in the public schools of the city of Boston, or their families, requiring charitable assistance, or for the benefit of any persons or the families of any persons who have formerly been such teachers, requiring charitable assistance. It shall have power to manage and dispose of the same according to its best discretion and to execute any and all trusts according to the tenor thereof which may be created for the purposes aforesaid.

SECT. 3. Said corporation shall likewise be entitled to receive from the members of the school committee within the present limits of that part of the city of Boston which was formerly the city of Charlestown, the fund known as the Charlestown School Trust Fund, and shall hereafter manage said fund and disburse the income thereof within the limits of the former city of Charlestown according to the tenor of the instruments creating said trust.

[*Approved March 13, 1877.*]

[See chapter 235, Acts of 1900, page 196. See, also, chapter 349, Acts of 1905, page 208.]

CHAPTER 400 OF THE ACTS OF 1898.

AN ACT RELATIVE TO THE SUPPORT OF THE PUBLIC SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston shall forthwith after the passage of this act, and on or before the first day of March in each year thereafter, by vote of two-thirds of all its members, taken by yeas and nays, make appropriations for the support of the public schools of said city for the financial year, including repairs and alterations on school buildings. Such appropriations shall be made by items specifying the purposes for which the money is to be expended. Such appropriations, which shall be included

within the tax limit of said city for municipal purposes as now established by law, shall not exceed in the aggregate, upon each one thousand dollars of the average valuation of the taxable property in said city as ascertained under the provisions of law limiting the rate of taxation in said city, the following sums for the periods specified, to wit:— For the financial year ending on the thirty-first day of January in the year eighteen hundred and ninety-nine, two dollars and eighty cents; for the financial year ending on the thirty-first day of January in the year nineteen hundred, two dollars and eighty-five cents; and for the financial year ending on the thirty-first day of January in the year nineteen hundred and one, and for each financial year thereafter, two dollars and ninety cents; and any vote or appropriation requiring a larger assessment than as above specified shall be void; and said school committee shall have no authority to incur any liability or make any expenditure in excess of such appropriations, anything in any statute to the contrary notwithstanding. Of the total amount authorized to be appropriated as aforesaid an appropriation of which the several items shall amount to not less than twenty-five cents upon each one thousand dollars of said average valuation shall be expended only for such repairs and alterations upon school buildings as said school committee shall order.

[Section 1, amended by chapter 448, Acts of 1901, by chapter 170, Acts of 1903, by chapter 205, Acts of 1906, by chapter 388, Acts of 1909, by chapter 708, Acts of 1911, by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See, also, chapter 132 of the Special Acts of 1918. See pages 200, 205, 209, 220, 228, 234, 244, 247.]

SECT. 2. The votes of said school committee making such appropriations shall have the same force and effect as orders or votes of the city council appropriating money, and shall be subject to the same provisions of law in respect to approval by the mayor, except that a vote of three-fourths of all the members of said school committee, taken by yeas and nays, shall be necessary to pass any such appropriation over the veto of the mayor.

SECT. 3. After an order or vote of said school committee making an appropriation shall have gone into effect the aggregate amount so appropriated shall be certified by the school committee to the board of assessors, and shall be included by said assessors in the amount to be raised by taxation in said city for such year.

SECT. 4. Any balance of an appropriation so made by said

school committee remaining unexpended at the close of any financial year, and not needed to carry out the requirements of any statute, gift, trust or special appropriation, and any amount within the limit above defined for such year not appropriated by said committee, shall be added to the amount which said committee may appropriate, as herein authorized, for the financial year next ensuing.

SECT. 5. The proceeds of any sale of any school lands or buildings shall be held in the city treasury of said city and used only for the purchase of land or the construction of buildings for school purposes, but shall not be so used without the approval of the mayor in writing in each specific case. Such proceeds shall be expended in accordance with the provisions of chapter four hundred and eight of the acts of the year eighteen hundred and ninety-five and acts in amendment thereof and in addition thereto.

SECT. 6. This act shall take effect upon its passage.

[*Approved May 7, 1898.*]

CHAPTER 235 OF THE ACTS OF 1900.

AN ACT RELATIVE TO THE SCHOOL COMMITTEE OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The members of the school committee of the city of Boston for the time being shall continue to constitute a corporation by the name of The School Committee of the City of Boston; shall as such corporation have all the powers and be subject to all the duties applicable to such corporations; shall continue to hold the funds now held by it for the benefit of persons or the families of persons who are or have been teachers in the public schools of the city of Boston, and all other real or personal property hereafter given for said purposes, and shall take and hold all property hereafter given to it for lectures and other educational purposes, including the property left by Robert C. Waterston, late of Boston, to be known as the Teachers' Waterston Fund; and, conforming to the directions of the givers thereof, shall manage and dispose of all said property or the income thereof according to its best discretion, for the purposes aforesaid; ¹[but shall dispose of the income of the fund known as the Charlestown School Trust Fund for the benefit of persons or the families of persons

¹ By chapter 262, Acts of 1902, amended by striking out the words in brackets.

who are or have been teachers within the limits of what was formerly the city of Charlestown.]

SECT. 2. This act shall take effect upon its passage.

[Approved April 13, 1900.]

CHAPTER 237 OF THE ACTS OF 1900.

AN ACT TO PROVIDE FOR A PUBLIC SCHOOL TEACHERS' RETIREMENT FUND IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Upon the passage of this act, a Teachers' Retirement Fund shall be created in the city of Boston, which shall consist of:—

(a.) A permanent fund, made up of gifts and legacies specifically given to said permanent fund, and a sum set apart by the board of trustees.

(b.) A general fund, made up of gifts and legacies not specifically given to said permanent fund, amounts retained from the salaries of teachers under the provisions of this act, and the interest derived from said permanent fund. The general fund may be drawn upon for the purposes of this act by said board of trustees, in its discretion.

SECT. 2. The superintendent of public schools in the city of Boston, three female teachers and three male teachers, also of said city and holding positions in the public schools as instructors, and four members of the school committee of said city, shall constitute the board of trustees. The superintendent of public schools shall hold office in said board *ex officio*, and the other ten members shall be chosen as follows:— At the first annual meeting of the school teachers in the city of Boston who are included in this act, which shall be held on the last Saturday of October in the year nineteen hundred, there shall be elected by ballot one female teacher who shall hold office for a term of one year, one female teacher who shall hold office for a term of two years, one female teacher who shall hold office for a term of three years, one male teacher who shall hold office for a term of one year, one male teacher who shall hold office for a term of two years and one male teacher who shall hold office for a term of three years; and a majority of all the votes cast shall be necessary in each case for an election. Said meeting shall be called by the superintendent of public schools after due notice to all the school teachers in the city of Boston included in this act, at

such hour and place as he shall designate. Annually thereafter, at a meeting duly called by said board of trustees on the last Saturday in October, one female teacher and one male teacher shall be elected in the same manner for a term of three years. At the first regular meeting of the school committee of the city of Boston in October in the year nineteen hundred it shall elect two of its number to be members of said board of trustees for a period of one year, and two of its number to be members of said board for a period of two years; and annually thereafter at its first meeting in October the school committee shall elect two of its number to be members of said board for a period of two years. Said board shall organize by adopting rules of its own, not inconsistent with this act, and in case of a vacancy in its membership shall have power to fill such vacancy for the unexpired term.

SECT. 3. Said board shall have control of the retirement fund, investing the same only in such securities as savings banks are authorized by law to invest in. The board shall receive and consider all applications for annuities under this act, and shall determine and direct payment of the same. The board shall keep full and complete records of the receipts and disbursements on account of this fund, and a complete list of all annuitants, and shall make a report of the same at each annual meeting of the teachers in October. All necessary expenses incurred by the board in carrying out the provisions of this act shall be paid out of the retirement fund, in accordance with votes of the board. The members of the board shall serve without compensation. Whenever any member of the board shall cease to hold a position as member of the school committee of said city, or as teacher in the public schools, respectively, his or her membership on the board shall thereupon cease.

[See chapter 233, Acts of 1902, page 204.]

SECT. 4. The city treasurer, under the direction of the board of trustees, shall be the custodian of the retirement fund, and shall make payments therefrom as ordered by the board. He shall receive such compensation for his services and clerk hire, not exceeding fifteen hundred dollars a year, as the board of trustees shall determine, and the sum so determined shall be appropriated for that purpose by the school committee of the city of Boston.

SECT. 5. Beginning with the monthly payments in November in the year nineteen hundred the city treasurer of the city of Boston shall reserve from the salary of each teacher who has come under the provisions of this act the sum of three dollars, and in every alternate monthly payment thereafter shall reserve the same sum, and shall pay the sums so reserved into the school teachers' retirement fund, as herein provided.

SECT. 6. The city treasurer, upon vote of the board of trustees, shall pay out of said retirement fund, in monthly payments, such an annuity to any teacher who shall retire or be discharged from the service of the city, as the fund will allow and said board of trustees shall determine; but in no case shall a teacher receive such annuity unless such teacher has taught for thirty years, and for at least ten years in the public day schools of the city of Boston, except as hereinafter provided.

SECT. 7. The city treasurer, upon a vote of the board of trustees, shall pay out of the retirement fund, in monthly payments, such an annuity to any teacher who has taught not less than two years in the city of Boston, although less than thirty-years in the aggregate, as the fund will allow and said board of trustees shall determine, if such teacher has become incapacitated for teaching and has been discharged from the service of the city of Boston: *provided*, that a certificate of such incapacity be furnished by the attending physician and by a physician employed by the board of trustees; and *further provided*, that the annuity shall cease when the incapacity ceases.

SECT. 8. All annuities shall be uniform in amount, whether the annuitants are retired under the provisions of section six or of section seven, except as provided in section nine of this act.

SECT. 9. No annuity shall be paid to any teacher until such teacher shall contribute, or has contributed to the general fund, a sum equal to all the assessments for thirty years, to wit:— Five hundred and forty dollars; but should any teacher seeking to retire under section six or section seven be unable to pay the full amount of assessments as above specified, before receiving an annuity, the board of trustees may in its discretion make to such retiring teacher such monthly payments as in the opinion of said board the needs of such teacher may require.

SECT. 10. Any teacher who shall have been a contributing member for two years or more, who shall retire from the service of the city of Boston not being in receipt of an annuity, shall, upon application within three months after date of such retirement, receive one-half of the total amount paid by such teacher into said fund.

SECT. 11. This act shall be binding upon all teachers entering the service of the city of Boston after it goes into effect, and upon such of the teachers in the service of said city at the time of its enactment as may thereafter elect to come under its provisions; and notice in writing to the superintendent of schools, signed by the teacher so electing, shall be conclusive as to such election.

SECT. 12. The term "teacher," in this act, shall include all supervisors, superintendents of instruction, principals and regular instructors in the public day schools.

SECT. 13. This act shall take effect upon its passage.

[Approved April 17, 1900.]

[See chapter 327, Special Acts of 1917. An Act to Exempt from Taxation the Pension and Annuity Funds for the Public School Teachers in the City of Boston, and the Pensions and Annuities Paid Therefrom.]

CHAPTER 448 OF THE ACTS OF 1901.

AN ACT RELATIVE TO THE PUBLIC SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight is hereby amended by striking out the whole of said section and inserting in place thereof the following:— *Section 1.* The school committee of the city of Boston, in each year, by vote of two-thirds of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount to be used in any one year for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of years preceding such year, and the money which

may be authorized by acts of the general court passed prior to the year nineteen hundred and two and not repealed, shall not exceed, prior to said last named year, an amount equal to two dollars and ninety cents, and after the year nineteen hundred and one an amount equal to three dollars and forty cents, upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amount which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amount of three dollars and forty cents not less than forty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not less than twenty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings.

SECT. 2. This act shall take effect upon its passage.

[*Approved May 29, 1901.*]

[Amended by chapter 170, Acts of 1903, by chapter 205, Acts of 1906, by chapter 388, Acts of 1909, by chapter 708, Acts of 1911, by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See, also, chapter 132, Special Acts of 1918. See pages 205, 209, 220, 228, 234, 244, 247.]

CHAPTER 473 OF THE ACTS OF 1901.

AN ACT TO ESTABLISH A SCHOOLHOUSE DEPARTMENT OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The schoolhouse department of the city of Boston is hereby established and shall be under the charge of a board of three commissioners, citizens of Boston, appointed by the mayor of the city without confirmation. During the current year one of said commissioners shall be appointed for the term of three years, one for the term of two years and one for the term of one year, beginning with the first day of June of said year; and on or before the expiration of any term a commissioner shall be appointed for a term of three years, beginning with the first day of June in the year in which such term expires. Any vacancy occurring in the number of the commissioners shall be filled by appointment of a commissioner in the manner aforesaid, for the remainder of the term. The members of the board shall be paid a salary; the chairman at the rate of four thousand dollars per annum, and each of the other members at the rate of thirty-

five hundred dollars per annum. The school committee shall appropriate money to pay the salaries of the members of the board and so much of the necessary expenses of said department as are not provided for by section four of this act. The provisions of chapter two hundred and sixty-six of the acts of the year eighteen hundred and eighty-five and of all other acts relating to the departments of the city of Boston or the officers or employees thereof, so far as they may be applicable and not inconsistent herewith, shall apply to said department and to the officers and employees thereof. The said board shall make an annual report in writing of its doings, and of all the business transacted by it, to the mayor of the city of Boston, and said report shall be printed as a public document of said city.

[Section 1 amended by chapter 376, Acts of 1904 See page 207.]

SECT. 2. The said board shall have and exercise all the power and authority conferred, and be subject to all the duties and obligations imposed, by all existing laws, whether special or general, upon the city council or school committee of the city of Boston relating to selecting lands for school purposes and requesting the street commissioners to take the same, providing temporary school accommodations, and making, altering and approving designs and plans for school purposes; erecting, completing, altering, repairing, furnishing, and preparing yards for, school buildings, and making contracts and selecting architects for doing the said work; and the said power and authority shall no longer be exercised by, nor said duties and obligations be imposed upon, the city council or school committee: *provided, however,* that the board of schoolhouse commissioners shall not incur any expense for any purpose beyond the amount authorized under section four of this act, in addition to the sums which may be appropriated by the school committee for such purpose.

SECT. 3. The said board in addition to the duties hereinbefore specified shall, as speedily as possible, request the street commissioners to take land for, and shall construct and furnish, and prepare yards for, such normal and other new school buildings as prior to the year nineteen hundred and two shall be determined by said board to be required at that date, for the accommodation of school children, in addition to the school buildings heretofore contracted for, after

first obtaining the opinion in writing of the superintendent of schools of said city: *provided, nevertheless*, that, whenever the price proposed to be paid for a lot of land is more than twenty-five per cent higher than its average assessed valuation during the previous three years, then said land shall not be taken by purchase; and during the current year and the three years following shall do such work on existing school buildings as shall be determined by the board to be required to secure proper ventilation, proper sanitary conditions, protection from fire, and facilities for escape in case of fire, after the receipt by this board in writing of the opinion of said superintendent upon the proposed plans.

SECT. 4. To meet the expense of carrying out the provisions of the preceding section the treasurer of the city shall from time to time, on the request of the mayor, approved by a two-thirds vote of all the members of each branch of the city council, taken by yeas and nays, issue and sell bonds of the city within the debt limit during the current year to the amount of one million dollars, and during each of the three years following, to an amount requested by said board and approved by the mayor prior to the first day of February, but not exceeding one million dollars in any one year. All expenses of said department incurred in carrying out the provisions of the preceding section shall be subject to approval by the mayor, and shall be paid out of the proceeds of said bonds.

[Section 4 amended by chapter 386, Acts of 1902. See page 204. See, also, chapter 392, Acts of 1905, for issue of additional bonds in that year.]

SECT. 5. The said board shall not erect or substantially alter any building, or provide temporary school accommodations, or furnish school buildings, or prepare school yards, until the superintendent of public schools of said city shall have submitted to this board his opinion in writing of the proposed changes and plans; nor shall said board request the street commissioners to take any land except within the limits of a school district which shall first be designated by the school committee, or pay for lands except as approved by the mayor.

SECT. 6. Nothing in this act shall prevent the school committee of the city from completing the taking of land, the erection and furnishing of buildings, and the preparation of yards, or from expending money under the provisions of chapter two

hundred and eighty-eight of the acts of the year nineteen hundred and one; but the school committee may at any time transfer the said duties to the board hereby created, and require it to carry out the provisions of the said act.

SECT. 7. Any officer or other employee of the school committee or of any department of the city who shall lose his employment or whose tenure of office will be affected by the provisions of this act or by the carrying out thereof, may be appointed to a similar position under the school committee, or in any other department of the city, without civil service examination or enrolment.

SECT. 8. Chapter two hundred and thirty-nine of the acts of the year eighteen hundred and ninety-nine, and all acts and parts of acts inconsistent herewith, are hereby repealed.

SECT. 9. This act shall take effect upon its passage.

[*Approved June 6, 1901.*]

CHAPTER 233 OF THE ACTS OF 1902.

AN ACT TO AUTHORIZE THE TRUSTEES OF THE PUBLIC SCHOOL TEACHERS' RETIREMENT FUND TO INVEST IN BONDS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The treasurer of the city of Boston is hereby authorized to sell to the trustees of the Public School Teachers' Retirement Fund, and the said trustees are hereby authorized to buy, bonds of the city of Boston, upon the same terms and in such manner as the said treasurer is now authorized to sell such bonds to the board of sinking fund commissioners of the city of Boston.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 27, 1902.*]

[See chapter 237, Acts of 1900, page 197.]

CHAPTER 386 OF THE ACTS OF 1902.

AN ACT RELATIVE TO THE BOARD OF SCHOOLHOUSE COMMISSIONERS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Chapter four hundred and seventy-three of the acts of the year nineteen hundred and one is hereby amended by striking out section four and inserting in place thereof the following:—*Section 4.* To meet the expenses incurred in taking land for and in constructing and furnishing such normal

and other new school buildings as prior to the year nineteen hundred and two shall be determined by said board to be required at that date for the accommodation of school children, in addition to the school buildings contracted for by the school committee, and in preparing yards for the same, the treasurer of the city shall from time to time, on the request of the mayor approved by a two-thirds vote of all the members of each branch of the city council, taken by yeas and nays, issue and sell bonds of the city within the debt limit during the current year to the amount of one million dollars, and during each of the three years following to an amount requested by said board and approved by the mayor, but not exceeding one million five hundred thousand dollars in any one year.

SECT. 2. This act shall take effect upon its passage.

[Approved May 12, 1902.]

CHAPTER 170 OF THE ACTS OF 1903.

AN ACT TO AUTHORIZE THE SCHOOL COMMITTEE OF THE CITY OF BOSTON
TO MAKE ADDITIONAL APPROPRIATIONS IN THE PRESENT YEAR FOR
THE SUPPORT OF THE PUBLIC SCHOOLS.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as amended by section one of chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, is hereby further amended by adding at the end thereof the words:—*provided*, that in the year nineteen hundred and three the school committee, instead of appropriating the said forty cents upon every such one thousand dollars solely for new school buildings, lands, yards and furnishings, as aforesaid, may appropriate such portion thereof as the mayor of the city may approve, not exceeding sixty thousand dollars, for the support of the public schools in addition to the amounts hereinbefore authorized to be used for that purpose,—so as to read as follows:—*Section 1.* The school committee of the city of Boston, in each year, by vote of two-thirds of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and may also make an appropriation in one

sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount to be used in any one year for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of years preceding such year, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and two and not repealed, shall not exceed, prior to said last named year, an amount equal to two dollars and ninety cents, and after the year nineteen hundred and one an amount equal to three dollars and forty cents, upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amount which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amount of three dollars and forty cents not less than forty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not less than twenty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings: *provided*, that in the year nineteen hundred and three the school committee, instead of appropriating the said forty cents upon every such one thousand dollars solely for new school buildings, lands, yards and furnishings, as aforesaid, may appropriate such portion thereof as the mayor of the city may approve, not exceeding sixty thousand dollars, for the support of the public schools, in addition to the amounts hereinbefore authorized to be used for that purpose.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 23, 1903.*]

[Amended by chapter 205, Acts of 1906, by chapter 388, Acts of 1909, by chapter 708, Acts of 1911, by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See, also, chapter 132, Special Acts of 1918. See pages 209, 220, 228, 234, 244, 247.]

CHAPTER 212 OF THE ACTS OF 1904.

AN ACT RELATIVE TO THE ADMISSION OF MEN TO THE BOSTON NORMAL SCHOOL.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may admit men to the normal school maintained by that

city, under such restrictions and subject to such regulations as the committee may deem advisable.

SECT. 2. This act shall take effect upon its passage.

[Approved April 9, 1904.]

CHAPTER 376 OF THE ACTS OF 1904.

AN ACT RELATIVE TO THE SCHOOLHOUSE DEPARTMENT OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred and seventy-three of the acts of the year nineteen hundred and one is hereby amended by striking out the words "The school committee shall appropriate money to pay the salaries of the members of the board and so much of the necessary expenses of said department as are not provided for by section four of this act", in lines nineteen to twenty-two, both inclusive, and inserting in place thereof the words:— The salaries and other necessary expenses of said department shall be apportioned and paid out of the proceeds of the bonds authorized by section four of this act, and out of such sums as shall be appropriated by said school committee for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and for repairs and alterations of school buildings, which apportionment shall be approved by the mayor,— so as to read as follows:— *Section 1.* The schoolhouse department of the city of Boston is hereby established and shall be under the charge of a board of three commissioners, citizens of Boston, appointed by the mayor of the city without confirmation. During the current year one of said commissioners shall be appointed for the term of three years, one for the term of two years and one for the term of one year, beginning with the first day of June of said year; and on or before the expiration of any term a commissioner shall be appointed for a term of three years, beginning with the first day of June in the year in which such term expires. Any vacancy occurring in the number of the commissioners shall be filled by appointment of a commissioner in the manner aforesaid, for the remainder of the term. The members of the board shall be paid a salary; the chairman at the rate of four thousand dollars per annum, and each of the other members at the rate of thirty-five hundred dollars per annum.

The salaries and other necessary expenses of said department shall be apportioned and paid out of the proceeds of the bonds authorized by section four of this act, and out of such sums as shall be appropriated by said school committee for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and for repairs and alterations of school buildings, which apportionment shall be approved by the mayor. The provisions of chapter two hundred and sixty-six of the acts of the year eighteen hundred and eighty-five and of all other acts relating to the departments of the city of Boston or the officers or employees thereof, so far as they may be applicable and not inconsistent herewith, shall apply to said department and to the officers and employees thereof. The said board shall make an annual report in writing of its doings, and of all the business transacted by it, to the mayor of the city of Boston, and said report shall be printed as a public document of said city.

SECT. 2. This act shall take effect upon its acceptance by the city council of the city of Boston.

[Approved May 25, 1904.]

[Accepted by city council, and approved by the mayor June 25, 1904.]

CHAPTER 349 OF THE ACTS OF 1905.

AN ACT TO REORGANIZE THE SCHOOL COMMITTEE OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston shall hereafter consist of five members, to be elected by such persons as shall be qualified to vote for school committee in said city; but no person shall be eligible for election to the committee who is not an inhabitant of the city and has not been a resident thereof for at least three years continuously prior to the election. The school committee shall serve without compensation, and their term of office shall begin with the beginning of the municipal year following their election. At the annual municipal election in the year nineteen hundred and five, two persons shall be elected as aforesaid, to hold office for three years, two for two years and one for one year; and thereafter at each annual municipal election there shall be elected for the term of three years

so many persons as may be necessary to fill the places of the member or members of said committee whose term or terms are about to expire. Vacancies in said committee arising from death, resignation or otherwise shall be filled for the unexpired term at the next annual municipal election.

SECT. 2. Upon the organization of the school committee elected under and in accordance with the provisions of this act, the terms of office of the members of the present school committee of the city of Boston shall immediately terminate, and said members shall cease to exercise any authority under chapter fifty-three of the acts of the year eighteen hundred and seventy-seven, and acts in amendment thereof and in addition thereto.

SECT. 3. The school committee elected under and in accordance with the provisions of this act shall be the lawful successors of the present school committee, and shall be entitled to all the powers and privileges conferred, and subject to the duties and obligations imposed by chapter fifty-three of the acts of the year eighteen hundred and seventy-seven, and acts in amendment thereof and in addition thereto.

SECT. 4. So much of any act as is inconsistent herewith is hereby repealed.

SECT. 5. This act shall take effect upon its passage.

[*Approved April 28, 1905.*]

[Section 33 of chapter 486 of the Acts of 1909 provides that the members of the school committee shall meet and organize annually on the first Monday in February. See, also, chapter 318, Acts of 1906, page 213.]

CHAPTER 205 OF THE ACTS OF 1906.

AN ACT RELATIVE TO APPROPRIATIONS FOR THE SUPPORT OF THE PUBLIC SCHOOLS IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as amended by section one of chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, and by section one of chapter one hundred and seventy of the acts of the year nineteen hundred and three, is hereby further amended by adding at the end thereof the words:— and *provided, further*, that in the year nineteen hundred and six the said school committee, instead of appropriating solely for repairs and alterations of school buildings the whole

proceeds of the twenty-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based, as aforesaid, may appropriate therefrom the sum of sixty thousand dollars for the support of the public schools, in addition to the amounts hereinbefore authorized to be appropriated for that purpose, and may appropriate for repairs and alterations of school buildings, as aforesaid, the remainder of the proceeds of said twenty-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based,—so as to read as follows:— *Section 1.* The school committee of the city of Boston, in each year, by vote of two-thirds of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount to be used in any one year for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of years preceding such year, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and two and not repealed, shall not exceed, prior to said last named year, an amount equal to two dollars and ninety cents, and after the year nineteen hundred and one an amount equal to three dollars and forty cents, upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amount which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amount of three dollars and forty cents not less than forty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not less than twenty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings: *provided*, that in the year nineteen hundred and three the school committee, instead of appropriating the said forty cents upon every such one thousand dollars solely for new school

buildings, lands, yards and furnishings, as aforesaid, may appropriate such portion thereof as the mayor of the city may approve, not exceeding sixty thousand dollars, for the support of the public schools, in addition to the amounts hereinbefore authorized to be used for that purpose; and *provided, further*, that in the year nineteen hundred and six the said school committee, instead of appropriating solely for repairs and alterations of school buildings the whole proceeds of the twenty-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based, as aforesaid, may appropriate therefrom the sum of sixty thousand dollars for the support of the public schools, in addition to the amounts hereinbefore authorized to be appropriated for that purpose, and may appropriate for repairs and alterations of school buildings, as aforesaid, the remainder of the proceeds of said twenty-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 28, 1906.*]

[Amended by chapter 388, Acts of 1909, by chapter 708, Acts of 1911, by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See also chapter 132, Special Acts of 1918. See pages 220, 228, 234, 244, 247.]

CHAPTER 231 OF THE ACTS OF 1906.

AN ACT RELATIVE TO THE TERMS OF OFFICE OF THE SUPERINTENDENT
AND ASSISTANT SUPERINTENDENTS OF THE PUBLIC SCHOOLS
OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston, in the current year, and in each sixth year thereafter, shall elect a superintendent of schools, who shall hold office for the term of six years from the first day of September in said year. In the current year the school committee shall elect six assistant superintendents, one of whom shall hold office for one year, one for two years, one for three years, one for four years, one for five years and one for six years, all of said terms to begin on the first day of September in the current year; and thereafter said committee shall annually elect one assistant superintendent for the term of six years from the first day of September in the year of his election. If a vacancy shall occur in the office of superintendent or of assistant superintendent the school committee shall fill such vacancy or vacancies for the

unexpired term. The school committee shall define the duties and fix the compensation of the superintendent and assistant superintendents, and may remove them, or any of them, for cause. The superintendent and assistant superintendents shall constitute a board, to be known as the board of superintendents. The superintendent shall, when present, preside at the meetings of said board. Said board shall have all the powers and duties now or hereafter conferred or imposed by law upon the board of supervisors of said city. No member of either branch of the city council or of the school committee shall hold the office of superintendent or assistant superintendent, and no member of either branch of the city council shall be a member of the school committee.

[Section 1 amended by chapter 489, Acts of 1914. See page 238.]

SECT. 2. The votes of a majority of the whole number of members of the school committee of the city of Boston shall be necessary to elect the superintendent of schools, the assistant superintendents, the head masters of the Latin, normal and high schools, the masters of the grammar schools, the director of a special study or exercise, or any officer employed by said committee.

SECT. 3. Sections seven and eight of chapter two hundred and forty-one of the acts of the year eighteen hundred and seventy-five are hereby repealed.

SECT. 4. This act shall take effect upon its passage.

[*Approved April 2, 1906.*]

CHAPTER 259 OF THE ACTS OF 1906.

AN ACT RELATIVE TO SALE OF LAND OR BUILDINGS OWNED BY THE CITY
OF BOSTON AND USED FOR SCHOOL PURPOSES.

Be it enacted, etc., as follows:

SECTION 1. The mayor of the city of Boston, the school committee and the schoolhouse commissioners of said city, acting jointly, are hereby established and created a board with power to sell and convey any land or buildings owned by the said city which at the time of any such sale are or have been used for school purposes, and which the school committee, by a majority vote of all its members, shall have voted is advisable to sell. The board hereby established shall, after the passage of the vote of the school committee as aforesaid, forthwith offer for sale, and sell, when a suitable price can be

obtained, the land or buildings specified in said vote; and the mayor of said city, when authorized by a majority of the board hereby established, shall forthwith execute a proper instrument to convey such land or buildings. The school committee may continue to use any such land or buildings until the completion of the sale and conveyance thereof.

SECT. 2. The said board established under and in accordance with the provisions of this act shall, for the purpose of carrying out the provisions of this act, have all the power and authority now vested in and possessed by the mayor, street commissioners and city council of said city of Boston relative to the sale of such land or buildings.

SECT. 3. The proceeds of any sale of land or buildings under the provisions of this act shall be expended by the schoolhouse commissioners of said city for the purchase of land and the erection of new buildings for school purposes, in accordance with the provisions of chapter four hundred and seventy-three of the acts of the year nineteen hundred and one, and acts in amendment thereof or in addition thereto.

SECT. 4. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 5. This act shall take effect upon its passage.

[*Approved April 7, 1906.*]

CHAPTER 318 OF THE ACTS OF 1906.

AN ACT RELATIVE TO THE TENURE OF OFFICE OF CERTAIN OFFICERS OF THE SCHOOL COMMITTEE OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston shall choose a secretary, not of their own number, who shall also serve as secretary to the board of superintendents, an auditor and a business agent, who shall hold their respective offices until removed by the committee for cause. The committee may also elect and remove such other subordinate officers not specifically provided for by law as they may deem expedient. The business agent may be elected without civil service examination, or enrolment.

SECT. 2. A majority of all the members of the school committee shall be necessary to constitute a quorum for the transaction of business.

SECT. 3. Section four of chapter two hundred and forty-one of the acts of the year eighteen hundred and seventy-five is hereby repealed.

SECT. 4. This act shall take effect upon its passage.

[*Approved April 26, 1906.*]

CHAPTER 295 OF THE ACTS OF 1907.

AN ACT TO ENLARGE THE POWERS OF THE SCHOOL COMMITTEE OF THE CITY OF BOSTON IN RESPECT TO PHYSICAL EDUCATION.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston, within the limit of the appropriations for such purposes made by it as hereinafter authorized or under existing authority of law, shall, during the summer vacation and such other part of the year as it may deem advisable, organize and conduct physical training and exercises, athletics, sports, games, and play, and shall provide proper apparatus, equipment and facilities for the same in the buildings, yards and playgrounds under the control of said committee, or upon any other land which it may have the right to use for this purpose.

SECT. 2. The said committee shall use for the purposes aforesaid such of the playgrounds, gymnasias or buildings under the control of the park commission of said city as the school committee may deem suitable therefor, and may equip the same therefor, such use to be subject however to such reasonable regulations and conditions as the park commission may prescribe: *provided, also*, that such use shall not extend to any playground, gymnasium or building under the control of the park commission which said commission shall by vote approved by the mayor declare to be unsuitable for such use.

SECT. 3. Appropriations for the above named purposes shall be made by the school committee in the same manner in which it makes appropriations for the support of the public schools, and the total amount of the appropriations which said committee is authorized by law to make is hereby increased for the current financial year of the city by two cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based, and by two cents additional, or four cents in all, for each subsequent year; but the amount of said increase shall be appropriated solely for the purposes mentioned in this act.

SECT. 4. This act shall take effect upon its passage.

[*Approved April 13, 1907.*]

CHAPTER 357 OF THE ACTS OF 1907.

AN ACT RELATIVE TO THE APPOINTMENT OF NURSES BY THE SCHOOL COMMITTEE OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston shall appoint one supervising female nurse and so many district female nurses as in their opinion are necessary. The said nurses shall hold office for such terms as the school committee may determine and shall perform such duties as the committee may designate, but more particularly they shall assist the medical inspectors in their work in the public schools of the city, seeing that the directions given by the inspectors are carried out, and giving such instruction to the pupils as will promote their physical welfare.

SECT. 2. No person shall be appointed as one of the said nurses unless she has taken a course of instruction in, and has graduated from, some hospital or similar institution giving a course of instruction in nursing at least two years in length, and has presented to the school committee satisfactory evidence that she possesses good character and health, nor unless, in addition, she shall have passed an examination given under the direction of the school committee and designed to test the applicant's training, knowledge, character, experience and aptness for the work.

SECT. 3. To meet the expense incurred under this act the school committee of the city may appropriate, in addition to the amounts allowed by chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, and in the same manner in which other appropriations for the support of the public schools of the city are made by the school committee, a sum not exceeding ten thousand dollars in the current financial year, and in each year thereafter two cents upon each one thousand dollars of the valuation upon which the appropriations of the city council of the city are based.

SECT. 4. This act shall take effect upon its passage.

[*Approved May 3, 1907.*]

CHAPTER 589 OF THE ACTS OF 1908.

AN ACT TO PROVIDE FOR THE PAYMENT OF PENSIONS TO TEACHERS IN THE PUBLIC DAY SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston shall forthwith establish a permanent school pension fund

for the payment of pensions as hereinafter set forth to the members of the teaching or supervising staff of the public day schools of the said city at a rate not exceeding one hundred and eighty dollars a year.

[Section 1 amended by chapter 617, Acts of 1910. See page 225.]

SECT. 2. The care and investment of said fund and of any gifts or legacies thereto are hereby vested in a board of three trustees, of whom one shall be the chairman of the board of commissioners of sinking funds of the city of Boston, *ex officio*, and another shall be chosen by said school committee, and the third shall be chosen by the board of trustees of the Teachers' Retirement Fund in the city of Boston, established under the provisions of chapter two hundred and thirty-seven of the acts of the year nineteen hundred. The said trustees shall serve without compensation. At the first regular meeting of the school committee of the city of Boston, after the adoption of this act, and in each fifth year thereafter, at one of the regular June meetings, or at some subsequent regular meetings of the said committee, it shall elect one member of the said board of trustees who shall hold office for the term of five years beginning with the first day of July in the year of his election. The board of trustees of the said Teachers' Retirement Fund shall elect one of the trustees of the said permanent school pension fund for the term of four years beginning with the first day of July of the current year, and shall, at the expiration of such term and in each fifth year thereafter, elect a member of said board of trustees for the term of five years beginning with the first day of July in the year of his election. Every such trustee shall subscribe, in a book kept for that purpose in the office of the city clerk in said city, a statement that he accepts the said office subject to the provisions of this act, and any elected member of said board of trustees whose term of office has expired shall continue to serve as a member of said board until his successor is duly elected and qualified. In case of a vacancy in the elected members of said board of trustees by reason of death, resignation or other cause, the body which elected the person whose place thus becomes vacant shall fill the vacancy by an election for the unexpired term.

SECT. 3. Said board of trustees shall have charge and control of said permanent school pension fund and of all amounts contributed thereto, and shall invest and reinvest the same in

securities in which the funds of savings banks in the commonwealth of Massachusetts may by law be invested, excepting personal securities, and said trustees may, from time to time, sell such securities and shall invest and reinvest the proceeds thereof, and any and all unappropriated income of said pension fund. The city treasurer of said city shall be the custodian of all securities and money belonging to the said permanent school pension fund and shall be responsible for the safe custody thereof; shall, whenever any of such securities are sold by the said trustees for the purpose of reinvestment, deliver the securities so sold upon receiving the proceeds thereof; shall, on such conditions and at such rates of interest as the trustees may approve, deposit temporarily in national banks doing business in Boston, or in trust companies organized under the laws of this commonwealth and doing a banking business in Boston, any money belonging to said fund which, in the opinion of the said trustees, it is inexpedient for the time being to invest in securities authorized by this act; and shall forthwith invest any money belonging to said pension fund in such securities authorized by this act as the said trustees may direct, and upon such terms as they may specify. The said trustees shall keep a record of their proceedings, and shall annually on the first day of February, or as soon thereafter as may be, make a written report to the school committee of the amount and condition of said fund and of the income thereof for the preceding municipal financial year, as established from time to time by said city. Their records and the securities belonging to said fund shall at all times be subject to the inspection of the school committee. The secretary of the school committee shall be the secretary of the said board of trustees and shall have the custody of all records, documents and papers belonging to them. The expense of such additional clerical assistance as may be needed in the office of said secretary for the purposes of this act shall be paid from the annual appropriations for the expenses hereinafter provided for.

SECT. 4. In addition to the amount which the school committee is now authorized by law to appropriate for the support of the public schools of the city, and for other purposes, it shall annually appropriate for the purposes contemplated by this act, and in the same manner in which it makes appropriations for other school purposes, the sum of five cents upon each one thousand dollars of the valuation on

which the appropriations of the city council of the city are based, and shall from time to time pay to the treasurer of the permanent pension fund such portions of the proceeds of said five cents upon each one thousand dollars of the valuation aforesaid as, in the opinion of the school committee, will not be needed for the purpose of paying pensions to teachers during that year.

[Section 4 amended by chapter 617, Acts of 1910, and by chapter 304, Acts of 1915. See pages 225, 242.]

SECT. 5. Section fifty-four of chapter twelve of the Revised Laws is hereby amended by striking out the words "ten and one-half dollars", in the twentieth line, and inserting in place thereof the words:—ten dollars and fifty-five cents,—so as to read as follows:—*Section 54.* The taxes assessed on property exclusive of the state tax, county tax and sums required by law to be raised on account of the city debt shall not in any year exceed twelve dollars in any city on every one thousand dollars of the assessors' valuation of the taxable property therein for the preceding year, said valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment, subject to the following provisions:—If the city council of a city which contains less than one hundred thousand inhabitants according to the last preceding national or state census so determines, the average of the assessors' valuation of the taxable property therein for the preceding three years, said valuation for each year being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment, shall be used to determine said limit of taxation instead of said assessors' valuation of the preceding year. In the city of Boston, and in all cities which contain one hundred thousand inhabitants or more according to the census aforesaid, said average shall be so used. In the city of Boston, said taxes shall not exceed ten dollars and fifty-five cents instead of twelve dollars as aforesaid. Any order or appropriation requiring a larger assessment than is herein limited shall be void. The provisions of this section shall not affect any existing exemption from the operation of the corresponding provisions of earlier laws.

[See chapter 521, Acts of 1910. An Act Relative to the Rate of Taxation in the city of Boston.]

SECT. 6. The total amount of pensions payable hereunder in any one year shall not exceed the proceeds of the said five cents upon each one thousand dollars of the valuation aforesaid, together with the income accruing during that year from the investment of the permanent pension fund.

[Section 6 amended by chapter 617, Acts of 1910, and by chapter 304, Acts of 1915. See pages 225, 242.]

SECT. 7. The school committee of said city, by a majority vote of all of its members, may retire with a pension any member of the teaching or supervising staff of the public day schools of the city of Boston who, in the opinion of said committee, is mentally or physically incapacitated for further efficient service, subject however to the limitations herein-after set forth. If the person so retired has attained the age of sixty-five years or has been engaged in teaching or supervising in the public day schools for a period aggregating thirty years, twenty of which shall have been in the public day schools of the city of Boston, such person shall be paid a pension at the rate of one hundred and eighty dollars per annum. If a person so retired shall be less than sixty-five years of age and shall have been engaged in teaching or supervising in the public day schools in Boston and elsewhere for a period aggregating less than thirty years, the annual pension paid to such person shall be such percentage of one hundred and eighty dollars as the total number of years of service of such person is of thirty years: *provided, however*, that if the annual pension of such person so determined shall be a larger percentage of one hundred and eighty dollars than the number of years which such person has taught in the public day schools in the city of Boston is of twenty years, then the annual pension paid to such person shall be such percentage of one hundred and eighty dollars as that person's length of service in the public day schools of said city is of twenty years; and *provided, further*, that the pension of any teacher retired under the provisions of this act shall terminate if and when, in the judgment of the school committee, the person's incapacity shall have ceased. In determining the aggregate length of service of any person retired in accordance with the provisions of this act any period of leave of absence under salary shall be considered as equivalent to an equal amount of actual teaching service. The city treasurer of the city shall pay pensions to teachers

retired under this act in accordance with monthly pay-rolls prepared and certified to by the school committee.

[Section 7 amended by chapter 617, Acts of 1910. See page 225.]

SECT. 8. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 9. This act shall take effect upon its acceptance by the city council of the city of Boston, with the approval by the mayor.

(The foregoing was laid before the Lieutenant Governor, Acting Governor, on the twenty-ninth day of May, 1908, and after five days it had "the force of a law", as prescribed by the Constitution, as it was not returned by him with his objections thereto within that time. Accepted by City Council, and approved by the Mayor June 22, 1908.)

[See chapter 327, Special Acts of 1917. An Act to Exempt from Taxation the Pension and Annuity Funds for the Public School Teachers in the City of Boston, and the Pensions and Annuities Paid Therefrom.]

CHAPTER 120 OF THE ACTS OF 1909.

AN ACT RELATIVE TO THE AUTHORITY OF THE SCHOOL COMMITTEE OF THE CITY OF BOSTON OVER ORGANIZATIONS OF SCHOOL PUPILS.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may prescribe such rules concerning the admission of pupils enrolled in the public schools of said city to secret organizations, except religious organizations, composed wholly or in part of public school pupils, and their continuance therein, as it may deem expedient for the welfare of the public schools, and may exclude from the public schools any pupil not required by law to attend school who neglects or refuses to comply with any rule prescribed in accordance with the provisions of this act.

SECT. 2. This act shall take effect upon its passage.
[Approved February 27, 1909.]

CHAPTER 388 OF THE ACTS OF 1909.

AN ACT RELATIVE TO APPROPRIATIONS FOR THE SUPPORT OF THE PUBLIC SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as

amended by section one of chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, by section one of chapter one hundred and seventy of the acts of the year nineteen hundred and three, and by section one of chapter two hundred and five of the acts of the year nineteen hundred and six, is hereby further amended by striking out the said section and inserting in place thereof the following: — *Section 1.* The school committee of the city of Boston, in each year, by vote of four-fifths of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount to be thus appropriated for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of years preceding such year, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and nine and not repealed, shall not exceed the following sums for the periods specified, to wit: —

For the financial year ending on the thirty-first day of January in the year nineteen hundred and ten, three dollars and fifty cents; for the financial year ending on the thirty-first day of January in the year nineteen hundred and eleven, three dollars and sixty cents; for the financial year ending on the thirty-first day of January in the year nineteen hundred and twelve, three dollars and seventy cents; and for each financial year thereafter, three dollars and seventy cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amounts which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amounts not less than forty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not less than twenty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings

SECT. 2. This act shall take effect upon its passage.
[Approved May 14, 1909.]

[Amended by chapter 708, Acts of 1911, by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See, also, chapter 132, Special Acts of 1918. See page 228, 234, 244, 247.]

CHAPTER 446 OF THE ACTS OF 1909.

AN ACT TO PROVIDE FOR A HIGH SCHOOL OF COMMERCE AND SCHOOL
ADMINISTRATION BUILDING IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The board of schoolhouse commissioners of the city of Boston may cause to be taken for the city as land is taken for schoolhouses; land in said city approved by the school committee of the city, for a building to be occupied by the High School of Commerce and by the administration offices of the school committee and of the board of schoolhouse commissioners; and said last named board shall build and furnish the building as approved by the school committee: *provided*, that the average assessed valuation of any land used or taken for said building shall not exceed twelve dollars and fifty cents a square foot; and *provided, further*, that land having a building thereon may be purchased at such price, irrespective of its assessed value, as the school committee, the schoolhouse commissioners and the mayor may determine.

SECT. 2. The school committee of said city, to meet the expenses incurred under this act, may appropriate a sum not exceeding fifty thousand dollars in the year nineteen hundred and nine, three hundred thousand dollars in the year nineteen hundred and ten, and two hundred and fifty thousand dollars in the year nineteen hundred and eleven. The amount which the school committee may thus appropriate in any single year shall be reckoned in determining the statutory limit of indebtedness of the city for that year. The treasurer of the city shall issue and sell negotiable bonds of the city to such amount as shall be determined by the school committee within the powers conferred by this act. Said bonds shall be payable in a period of years not exceeding twenty, and shall bear interest at a rate not exceeding four per cent per annum. The city may, at the discretion of the mayor, issue said bonds upon the serial payment plan, instead of establishing a sinking fund for the retirement thereof. Such

plan, if adopted, shall provide for the issue of bonds or scrip to be paid serially in such amounts and at such times as shall be determined by the mayor; the bond last payable to become due at a date not later than that on which the whole series of bonds would have matured if they had been issued under the sinking fund method. The orders of the school committee determining the amount of said bonds which the city treasurer is to issue shall be presented to the mayor for his approval or disapproval, and the same proceedings shall be had in respect thereto as are now prescribed by law in regard to other orders of the school committee involving the expenditure of money. The proceeds of said bonds shall be expended by the board of schoolhouse commissioners of the city in accordance with the provisions of this act and of chapter four hundred and seventy-three of the acts of the year nineteen hundred and one and of any amendments thereof.

SECT. 3. The proceeds of the sale of the estate on Mason street in said city now occupied by the school committee for office and other purposes, and of the Winthrop school estate on Tremont street, shall be applied toward the cost of the land and building authorized by this act, and the amount of bonds which may be issued hereunder shall be reduced by an amount equivalent to the net proceeds of such sale: *provided*, that if such sale shall not be completed until after the issue of some or all of the bonds authorized hereby, then the net proceeds of such sale, less any amount employed in reduction of the amount of bonds thereafter to be issued as above provided, shall be paid to the board of sinking fund commissioners and applied to the retirement or redemption of the bonds authorized hereby.

SECT. 4. This act shall take effect upon its passage.

[*Approved May 26, 1909.*]

[See, also, chapter 540, Acts of 1911, page 228.]
[Amended by chapter 363, Acts of 1913. See page 232.]

CHAPTER 537 OF THE ACTS OF 1909.

AN ACT RELATIVE TO THE PAYMENT OF PENSIONS TO TEACHERS IN THE
PUBLIC DAY SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Those persons who were annuitants of the Boston Teachers' Retirement Fund Association at the time

when chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight took effect, and all other teachers who had retired previous to said time and who had taught in the public day schools for a period aggregating thirty years, twenty of which had been in the public day schools of the city of Boston, shall be paid annual pensions at the rates and from the fund established by said act, forty of such persons and teachers to receive such pensions during the first year after this act shall take effect and forty more of such persons and teachers to receive such pensions during each succeeding year thereafter, according to their aggregate length of teaching service in the public day schools, those whose aggregate length of such service had been the longest first to receive such pensions, until all the persons eligible for pensions under this act have received them: *provided*, that all such persons and teachers who wish to receive such pensions shall so notify, in writing, the school committee of said city within three months after this act shall take effect; and *provided, further*, that all persons receiving pensions under this act shall hold themselves subject to the call of said school committee to teach in case of need or emergency at the rates of pay current for substitutes at the time when they are so called.

SECT. 2. Said school committee shall prepare, or cause to be prepared, a list of the persons eligible for pensions under this act, and the city treasurer of said city shall pay such pensions to such persons in accordance with monthly pay-rolls prepared and certified to by the school committee.

SECT. 3. This act shall take effect at any time during the existence of the fund hereinbefore mentioned when accepted by the school committee of the city of Boston, but no adverse action by the school committee shall prevent any later acceptance of this act.

(The foregoing was laid before the Governor on the fourteenth day of June, 1909, and after five days it had "the force of a law", as prescribed by the Constitution, as it was not returned by him with his objections thereto within that time.)

[This act was not accepted by the School Committee, and was practically repealed by chapter 617, Acts of 1910.]

CHAPTER 617 OF THE ACTS OF 1910.

AN ACT RELATIVE TO THE PAYMENT OF PENSIONS TO THE MEMBERS OF
THE TEACHING OR SUPERVISING STAFF OF THE PUBLIC
SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight is hereby amended by striking out the words "at a rate not exceeding one hundred and eighty dollars a year", in the fifth and sixth lines, so as to read as follows:— *Section 1.* The school committee of the city of Boston shall forthwith establish a permanent school pension fund for the payment of pensions as hereinafter set forth to the members of the teaching and supervising staff of the public day schools of the said city.

SECT. 2. Section four of said chapter is hereby amended by adding at the end thereof the words:— Accrued interest not expended during any year shall be available for the payment of pensions during any subsequent year,— so as to read as follows:— *Section 4.* In addition to the amount which the school committee is now authorized by law to appropriate for the support of the public schools of the city, and for other purposes, it shall annually appropriate for the purposes contemplated by this act, and in the same manner in which it makes appropriations for other school purposes, the sum of five cents upon each one thousand dollars of the valuation on which the appropriations of the city council of the city are based, and shall from time to time pay to the treasurer of the permanent pension fund such portions of the proceeds of said five cents upon each one thousand dollars of the valuation aforesaid as, in the opinion of the school committee, will not be needed for the purpose of paying pensions to teachers during that year. Accrued interest not expended during any year shall be available for the payment of pensions during any subsequent year.

[Section 2 amended by chapter 304, Acts of 1915. See page 242.]

SECT. 3. Said chapter is hereby further amended by striking out sections six and seven and inserting in place thereof the following sections:— *Section 6.* The total amount of pensions payable hereunder in any one year shall not exceed the proceeds of the said five cents upon each one

thousand dollars of the valuation aforesaid, together with the accrued interest of the permanent fund. In case the amount available in any one year under this act is not sufficient to pay the pensions that have been granted, the amount so available shall be divided pro rata among those to whom pensions have been or may be granted on the basis of the amount of the pension each is then receiving: *provided*, that in no case, nor in any year, shall the pension of any person retired after thirty years of service be less than three hundred and twelve dollars. *Section 7.* The school committee of said city, by a majority vote of all its members, may retire with a pension any members of the teaching or supervising staff of the public day schools of the city of Boston, who shall have attained the age of sixty-five years, and such other members of the teaching or supervising staff of said schools, as, in the opinion of said school committee, shall be incapacitated for further efficient service. If a person so retired has been employed in teaching or supervising in public day schools for a period aggregating thirty years or more, ten years of which shall have been in the employ of the school committee of the city of Boston, such person shall be paid a pension at the annual rate of one third of the annual salary paid to said person at the time of retirement: *provided*, that in no case shall the pension of any person so retired after thirty years of service, be less than three hundred and twelve dollars nor more than six hundred dollars. If a person so retired has been employed in teaching or supervising in the public day schools for a period aggregating less than thirty years, ten years of which shall have been in the employ of the school committee of the city of Boston, said person shall be paid a pension which bears the same ratio to the pension provided for on retirement after thirty years of service as the total number of years of service of said person bears to thirty years. The pension of any teacher retired because of incapacity shall terminate if, and when, in the judgment of the school committee such person's incapacity shall have ceased and said teacher shall have been tendered reappointment in the public schools of the city of Boston. In determining the aggregate length of service of any person retired under the provisions of this act, any period of leave of absence under salary shall be considered as equivalent to an equal amount of teaching service. The treasurer of the city of Boston shall pay pensions under this act in accordance with monthly

pay-rolls prepared and certified to by the school committee. The school committee of the city of Boston shall establish a schedule of pensions in accordance with the provisions of this act. The pensions of persons already retired under the provisions of said chapter five hundred and eighty-nine shall be re-established in accordance with the provisions of this act to date from the first day of the calendar month next following the passage of this act.

[Section 3 amended by chapter 304, Acts of 1915. See page 242.]

SECT. 4. The school committee of said city during the year nineteen hundred and ten shall grant pensions to not less than sixty persons, who were annuitants of the Boston Teachers' Retirement Fund Association at the time when said chapter five hundred and eighty-nine took effect or teachers who had retired previous to said time, having taught in the public day schools for a period aggregating thirty years, twenty of which were in the public day schools of the city of Boston, at a rate not less than one hundred and eighty dollars per annum for each person, which shall be payable from the fund established under the provisions of this act, and during each year thereafter such a number of additional persons shall be pensioned as shall be necessary to keep on the roll the names of not less than sixty such persons: *provided*, that all such persons receiving pensions shall hold themselves subject to the call of said school committee to teach in case of need or emergency at the rates of pay current for substitutes at the time when they are so called; and *provided, further*, that no person shall be paid a pension under this section who shall not have made written application therefor to the secretary of said school committee within three months after the passage of this act.

[Section 4 amended by chapter 569, Acts of 1912. See page 231.]

SECT. 5. The term "teaching or supervising staff of the public day schools of the city of Boston" as used in this act shall include the superintendent, assistant superintendents, supervisors, assistant supervisors, directors, assistant directors, principals and all other persons permanently employed in giving or supervising instruction in the public schools of the city of Boston, and the principal and the teachers of the Parental School of the city of Boston: *provided*, that all appointments of principals or of teachers in the Parental

School of the city of Boston, after the passage of this act, shall be approved by the school committee of the city of Boston, before said principals or teachers begin service.

SECT. 6. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 7. This act shall take effect upon its passage.

(The foregoing was laid before the Governor on the sixth day of June, 1910, and after five days it had "the force of a law", as prescribed by the Constitution, as it was not returned by him with his objections thereto within that time.)

[See, also, chapter 569, Acts of 1912. See page 231.]

CHAPTER 540 OF THE ACTS OF 1911.

AN ACT TO AUTHORIZE THE PARK COMMISSIONERS OF THE CITY OF BOSTON
TO PERMIT THE SCHOOL AUTHORITIES OF THAT CITY TO ERECT
A BUILDING FOR THE HIGH SCHOOL OF COMMERCE
WITHIN THE LIMITS OF THE PARK
SYSTEM OF THE CITY.

Be it enacted, etc., as follows:

SECTION 1. The park commissioners of the city of Boston are hereby authorized, upon the request of the schoolhouse commissioners of the city, with the approval of the school committee of the city, to permit the erection of a building for the High School of Commerce within the limits of the Back Bay Fens in the city of Boston.

SECT. 2. This act shall take effect upon its passage.

[*Approved June 10, 1911.*]

[See, also, chapter 446, Acts of 1909, page 222.]

[Repealed by section 4 of chapter 363, Acts of 1913.]

CHAPTER 708 OF THE ACTS OF 1911.

AN ACT TO AUTHORIZE THE MAKING OF APPROPRIATIONS FOR INCREASING
THE PRESENT SALARIES OF THE TEACHERS IN THE PUBLIC
SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as amended by section one of chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, by section one of chapter one hundred and seventy of the acts of the year nineteen hundred and three, by section one of chapter two hundred and five of the acts of the year nine-

teen hundred and six, and by section one of chapter three hundred and eighty-eight of the acts of the year nineteen hundred and nine, is hereby further amended by striking out the said section and inserting in place thereof the following:—

Section 1. The school committee of the city of Boston, in each year, by vote of four-fifths of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor, and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount thus to be appropriated for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of preceding years, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and eleven and not repealed, shall not exceed the following sums for the periods specified, to wit:—for the financial year ending on the thirty-first day of January, nineteen hundred and thirteen, three dollars and eighty cents, for the financial year ending on the thirty-first day of January, nineteen hundred and fourteen, three dollars and ninety cents, for the financial year ending on the thirty-first day of January, nineteen hundred and fifteen, and for each financial year thereafter, three dollars and ninety-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amounts which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amounts not less than forty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not less than twenty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings.

SECT. 2. Said chapter four hundred of the acts of the year eighteen hundred and ninety-eight as amended is also further amended by inserting after section one thereof the following new section:—*Section 2.* Of the appropriations which the school committee is authorized by section one of

this act to make for the support of the public schools, a sum equalling ten cents for the financial year ending on the thirty-first day of January in the year nineteen hundred and thirteen, a sum equalling twenty cents for the financial year ending on the thirty-first day of January in the year nineteen hundred and fourteen, and a sum equalling twenty-five cents for each financial year thereafter, upon each one thousand dollars of the valuation on which the appropriations of the city council are based, shall wholly be appropriated by said school committee for the purpose of increasing the present salaries of the teachers in the public schools of the city, and nothing contained in any statute heretofore enacted shall prevent the school committee from putting such increases into effect when the funds therefor shall become available under the provisions of this act.

SECT. 3. This act shall take effect upon its passage.

[*Approved July 15, 1911.*]

[Amended by chapter 615, Acts of 1913, and by chapter 267, Special Acts of 1916. See, also, chapter 132, Special Acts of 1918. Pages 234, 244, 247.]

CHAPTER 195 OF THE ACTS OF 1912.

AN ACT TO PROVIDE FOR THE USE OF PUBLIC SCHOOL PROPERTY OF THE CITY OF BOSTON FOR SOCIAL, CIVIC AND OTHER PURPOSES.

Be it enacted, etc., as follows:

SECTION 1. For the purpose of promoting the usefulness of the public school property of the city of Boston, the school committee of that city may conduct such educational and recreative activities in or upon school property under its control, and shall allow the use thereof by individuals and associations, subject to such regulations as the school committee may establish, for such educational, recreative, social, civic, philanthropic and similar purposes as the committee may deem to be for the interest of the community: *provided*, that no admission fee is charged and that such use shall not interfere or be inconsistent with the use of the premises for school purposes.

[Section 1 amended by chapter 86, Special Acts of 1916. See page 243.]

SECT. 2. For the purpose of carrying out the provisions of this act, the school committee may appropriate in each year in addition to and in the same manner in which it makes appropriations for the support of the public school and other purposes authorized by law, a sum not exceeding two cents

upon each one thousand dollars of the valuation upon which the appropriations of the city council of the city are based.

SECT. 3. This act shall take effect upon its passage.

[*Approved March 5, 1912.*]

CHAPTER 569 OF THE ACTS OF 1912.

AN ACT TO EXTEND THE TIME WITHIN WHICH CERTAIN APPLICATIONS FOR PENSIONS MAY BE MADE BY TEACHERS IN THE PUBLIC SCHOOLS OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section four of chapter six hundred and seventeen of the acts of the year nineteen hundred and ten is hereby amended by striking out the words, "within three months after the passage of this act", in the last two lines of the section, and inserting in place thereof the words:— before the first day of August in the year nineteen hundred and twelve,— so as to read as follows:— *Section 4.* The school committee of said city during the year nineteen hundred and ten shall grant pensions to not less than sixty persons, who were annuitants of the Boston Teachers' Retirement Fund Association at the time when said chapter five hundred and eighty-nine took effect or teachers who had retired previous to said time, having taught in the public day schools for a period aggregating thirty years, twenty of which were in the public day schools of the city of Boston, at a rate not less than one hundred and eighty dollars per annum for each person, which shall be payable from the fund established under the provisions of this act, and during each year thereafter such a number of additional persons shall be pensioned as shall be necessary to keep on the roll the names of not less than sixty such persons: *provided*, that all such persons receiving pensions shall hold themselves subject to the call of said school committee to teach in case of need or emergency at the rates of pay current for substitutes at the time when they are so called; and *provided, further*, that no person shall be paid a pension under this section who shall not have made written application therefor to the secretary of said school committee before the first day of August in the year nineteen hundred and twelve.

SECT. 2. Persons who have been employed in teaching or supervising in the public schools of the town of Hyde Park prior to the first day of January, in the year nineteen hundred

and twelve, and who then became members of the teaching or supervising staff of the public day schools of the city of Boston, shall be entitled to receive the benefits under chapter two hundred and thirty-seven of the acts of the year nineteen hundred, and chapter six hundred and seventeen of the acts of the year nineteen hundred and ten, in the same manner as if such service had been wholly rendered in the city of Boston.

SECT. 2. This act shall take effect upon its passage.
[Approved May 7, 1912.]

CHAPTER 337 OF THE ACTS OF 1913.

ACT TO PROVIDE FOR AN INDEPENDENT AGRICULTURAL SCHOOL WITHIN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may establish and maintain an independent agricultural school, as defined by chapter four hundred and seventy-one of the acts of the year nineteen hundred and eleven, and under the authority of and subject to the provisions of said act and acts in amendment thereof and in addition thereto.

SECT. 2. For the purpose of carrying out the provisions of this act, the board of schoolhouse commissioners of the city of Boston may cause to be taken for the city, in the same manner in which land is taken for schoolhouses, land in that city not exceeding fifty acres, approved by the school committee of the city, and shall build and furnish such buildings as are approved by the school committee: *provided*, that land having a building thereon may be purchased at such price as the school committee, the schoolhouse commissioners and the mayor may determine.

SECT. 3. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 4. This act shall take effect upon its passage.
[Approved March 21, 1913.]

CHAPTER 363 OF THE ACTS OF 1913.

AN ACT TO PROVIDE FOR A BUILDING FOR THE HIGH SCHOOL OF COMMERCE IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Chapter four hundred and forty-six of the acts of the year nineteen hundred and nine is hereby amended by

striking out section one and inserting in place thereof the following:— *Section 1.* The board of schoolhouse commissioners of the city of Boston may cause to be taken for the city in the manner provided for the taking of land for school-houses, land for a building to be occupied by the High School of Commerce, and said board shall erect and furnish said building as approved by the school committee: *provided, however,* that the building may be erected within the limits of the Back Bay Fens, if the mayor and the city council of Boston shall so determine.

SECT. 2. Section two of said chapter four hundred and forty-six is hereby amended by inserting after the word “eleven”, in the seventh line, the words:— and one hundred thousand dollars in the year nineteen hundred and thirteen,— so as to read as follows:— *Section 2.* The school committee of said city, to meet the expenses incurred under this act, may appropriate a sum not exceeding fifty thousand dollars in the year nineteen hundred and nine, three hundred thousand dollars in the year nineteen hundred and ten, and two hundred and fifty thousand dollars in the year nineteen hundred and eleven, and one hundred thousand dollars in the year nineteen hundred and thirteen. The amount which the school committee may thus appropriate in any single year shall be reckoned in determining the statutory limit of indebtedness of the city for that year. The treasurer of the city shall issue and sell negotiable bonds of the city to such amount as shall be determined by the school committee within the powers conferred by this act. Said bonds shall be payable in a period of years not exceeding twenty, and shall bear interest at a rate not exceeding four per cent per annum. The city may, at the discretion of the mayor, issue said bonds upon the serial payment plan, instead of establishing a sinking fund for the retirement thereof. Such plan, if adopted, shall provide for the issue of bonds or scrip to be paid serially in such amounts and at such times as shall be determined by the mayor; the bond last payable to become due at a date not later than that on which the whole series of bonds would have matured if they had been issued under the sinking fund method. The orders of the school committee determining the amount of said bonds which the city treasurer is to issue shall be presented to the mayor for his approval or disapproval, and the same proceedings shall be had in respect thereto as are now prescribed by law in regard to other orders of the school committee involving the expenditure of money.

The proceeds of said bonds shall be expended by the board of schoolhouse commissioners of the city in accordance with the provisions of this act and of chapter four hundred and seventy-three of the acts of the year nineteen hundred and one and of any amendments thereof.

SECT. 3. Section three of said chapter four hundred and forty-six of the acts of the year nineteen hundred and nine is hereby amended by striking out in the first, second and third lines of said section the following "of the estate on Mason street in said city now occupied by the school committee for office and other purposes and", so as to read as follows:—*Section 3.* The proceeds of the sale of the Winthrop school estate on Tremont street shall be applied toward the cost of the land and building authorized by this act, and the amount of bonds which may be issued hereunder shall be reduced by an amount equivalent to the net proceeds of such sale: *provided*, that if such sale shall not be completed until after the issue of some or all of the bonds authorized hereby, then the net proceeds of such sale, less any amount employed in reduction of the amount of bonds thereafter to be issued as above provided, shall be paid to the board of sinking fund commissioners and applied to the retirement or redemption of the bonds authorized hereby.

SECT. 4. Chapter five hundred and forty of the acts of the year nineteen hundred and eleven is hereby repealed.

SECT. 5. Sections one and three of this act shall take effect upon its passage, and section two shall take effect if approved within the calendar year nineteen hundred and thirteen by the mayor and by the city council of the city of Boston.

[*Approved March 26, 1913.*]

[Accepted by city council, and approved by mayor December 23, 1913.]

CHAPTER 615 OF THE ACTS OF 1913.

AN ACT RELATIVE TO APPROPRIATIONS FOR THE SUPPORT OF PUBLIC SCHOOLS,
FOR NEW SCHOOL BUILDINGS AND FOR REPAIRS AND ALTERA-
TIONS OF SCHOOL BUILDINGS IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as amended by section one of chapter four hundred and forty-

eight of the acts of the year nineteen hundred and one, by section one of chapter one hundred and seventy of the acts of the year nineteen hundred and three, by section one of chapter two hundred and five of the acts of the year nineteen hundred and six, by section one of chapter three hundred and eighty-eight of the acts of the year nineteen hundred and nine, and by section one of chapter seven hundred and eight of the acts of the year nineteen hundred and eleven, is hereby further amended by striking out the said section and inserting in place thereof the following:— *Section 1.* The school committee of the city of Boston, in each year, by vote of four-fifths of all its members, taken by yeas and nays, may make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor, and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount thus to be appropriated for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of preceding years, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and thirteen and not repealed, shall not exceed the following sums for the periods specified, to wit:— for the financial year ending on the thirty-first day of January, nineteen hundred and fourteen, three dollars and ninety-five cents, for the financial year ending on the thirty-first day of January, nineteen hundred and fifteen, and for each financial year thereafter, four dollars and five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amounts which may so be raised shall be appropriated by the school committee as aforesaid, and shall be a part of and be met by taxes within the tax limit; and of said amounts not more than thirty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not more than thirty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings: *provided, however,* that if of said amounts less than thirty cents upon every such one thousand dollars shall be appropriated solely for

new school buildings, lands, yards and furnishings as aforesaid, the balance remaining of such appropriation for new school buildings, lands, yards and furnishings shall be certified by the school committee to the mayor and shall be added to the amount upon each one thousand dollars of the valuation on which the appropriations of the city council are based and may be appropriated for other than school purposes.

SECT. 2. This act shall take effect upon its passage.

[*Approved May 8, 1913.*]

[Amended by chapter 267, Special Acts of 1916. See, also, chapter 132, Special Acts of 1918. Pages 244, 247.]

CHAPTER 128 OF THE ACTS OF 1914.

AN ACT RELATIVE TO THE INDUSTRIAL SCHOOL FOR BOYS IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The land situated on Halleck, Archibald and Goldthwaite streets in the city of Boston, heretofore taken by the board of street commissioners of that city, at the request of the public works department, for a garbage station, is hereby transferred to the control of the school committee, to be used for school purposes and to be occupied by the industrial school for boys. The payment of all damages for the land so taken shall be met by appropriation by loan or otherwise by the school committee in accordance with law, and any payments made for said land shall be chargeable to the appropriation for new school buildings, lands, yards and furnishings.

SECT. 2. The said board of street commissioners is further authorized to take in fee, in accordance with the provisions of section thirty-one of chapter four hundred and eighty-six of the acts of the year nineteen hundred and nine, additional land in said city so that the lot to be occupied by the industrial school for boys may exceed two acres but shall not exceed four acres in area.

SECT. 3. This act shall take effect upon its acceptance by the mayor and the city council of the city of Boston.

[*Approved March 5, 1914.*]

[Accepted by city council, and approved by mayor August 11, 1914.]

CHAPTER 331 OF THE ACTS OF 1914.

AN ACT TO PROVIDE FOR A SCHOOL ADMINISTRATION BUILDING IN THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston, for the purpose of acquiring a site for an administration building and of constructing the building upon the site so acquired, or upon land now owned by the city and used for school purposes or otherwise, and for the purpose of furnishing the said building, may appropriate the whole or any part of the amount authorized for new school buildings, lands, yards and furnishings by chapter four hundred and fifty of the acts of the year nineteen hundred and seven.

[Section 1, amended by section 3, chapter 267, Special Acts of 1916. See page 244.]

SECT. 2. The board of schoolhouse commissioners of said city may cause to be taken, in the same manner in which land is taken for schoolhouses, land in said city approved by the school committee for the said building, and the board of schoolhouse commissioners shall build and furnish such building as approved by the school committee.

SECT. 3. The proceeds of the sale of the estate on Mason street in said city now occupied by the school committee for office and other purposes shall be applied toward the cost of the land and building authorized by this act, and the bonds issued under the provisions of said chapter four hundred and fifty shall be reduced by an amount equal to the net proceeds of such sale: *provided*, that if such sale shall not be completed until after the issue of any or all of the said bonds, then the net proceeds of such sale, less any amount employed in reduction of the amount of bonds thereafter to be issued as above provided, shall be paid to the board of sinking fund commissioners and applied to the retirement or redemption of the said bonds.

[Section 3, amended by section 4, chapter 267, Special Acts of 1916. See page 244.]

SECT. 4. The superintendent of public buildings of the city of Boston may provide offices and accommodations for the school committee and the board of schoolhouse commissioners in the building authorized by chapter two hundred and sixty-three of the acts of the year nineteen hundred and thirteen, upon such terms and conditions as may be agreed to

by the mayor and the school committee of the city of Boston, acting in its corporate capacity, and thereupon the occupancy and control of that part of the building to be occupied by the school committee and by the board of schoolhouse commissioners shall be the same as that of other lands and buildings occupied for school purposes. The cost of constructing and furnishing that part of said building to be under the control of the school committee, which the mayor and the school committee may determine as aforesaid to be borne by the school committee, shall be met by appropriation under the provisions of section one of this act.

[Section 4, repealed by section 5, chapter 267, Special Acts of 1916. See page 244.]

SECT. 5. This act shall take effect upon its acceptance by the city council of said city, with the approval of the mayor.

[*Approved April 9, 1914.*]

[Accepted by city council and approved by mayor July 30, 1914.]

CHAPTER 489 OF THE ACTS OF 1914.

AN ACT TO AUTHORIZE THE SCHOOL COMMITTEE OF THE CITY OF BOSTON TO LIMIT THE NUMBER OF ASSISTANT SUPERINTENDENTS.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter two hundred and thirty-one of the acts of the year nineteen hundred and six is hereby amended by striking out the words "current year", in the second and fifth lines, respectively, and inserting in place thereof, in each case, the words:—year nineteen hundred and six,—by striking out the words "the current", in the tenth line, and inserting in place thereof the word:—said,—by striking out the word "shall", in the eleventh line, and inserting in place thereof the word:—may,—by inserting after the word "elect", in the same line, the words:—not more than,—by striking out the words "or of assistant superintendent", in the fourteenth line,—by striking out the words "or vacancies", in the fifteenth line, and by inserting after the word "term", in the sixteenth line, the words:—and if a vacancy shall occur in the office of assistant superintendent, the school committee may fill such vacancy for the unexpired term,—so as to read as follows:—*Section 1.* The school committee of the city of Boston, in the year nineteen hundred and six, and in each sixth year thereafter, shall

elect a superintendent of schools, who shall hold office for the term of six years from the first day of September in said year. In the year nineteen hundred and six the school committee shall elect six assistant superintendents, one of whom shall hold office for one year, one for two years, one for three years, one for four years, one for five years and one for six years, all of said terms to begin on the first day of September in said year; and thereafter said committee may annually elect not more than one assistant superintendent for the term of six years from the first day of September in the year of his election. If a vacancy shall occur in the office of superintendent the school committee shall fill such vacancy for the unexpired term, and if a vacancy shall occur in the office of assistant superintendent, the school committee may fill such vacancy for the unexpired term. The school committee shall define the duties and fix the compensation of the superintendent and assistant superintendents, and may remove them, or any of them, for cause. The superintendent and assistant superintendents shall constitute a board, to be known as the board of superintendents. The superintendent shall, when present, preside at the meetings of said board. Said board shall have all the powers and duties now or hereafter conferred or imposed by law upon the board of supervisors of said city. No member of either branch of the city council or of the school committee shall hold the office of superintendent or assistant superintendent, and no member of either branch of the city council shall be a member of the school committee.

SECT. 2. This act shall take effect upon its passage.

[*Approved May 7, 1914.*]

CHAPTER 738 OF THE ACTS OF 1914.

AN ACT TO AUTHORIZE THE ESTABLISHMENT OF DISCIPLINARY DAY SCHOOLS
IN THE CITY OF BOSTON AND THE ABOLITION OF THE PARENTAL
SCHOOL OF SAID CITY.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may establish and maintain one or more disciplinary day schools for the instruction and training of children who are habitual truants, absentees or school offenders as defined in sections three, four and five of chapter forty-six of the Revised Laws as amended by chapter three hundred and

thirty of the acts of the year nineteen hundred and three and by chapter two hundred and twenty of the acts of the year nineteen hundred and four, and by sections six, seven and eight, respectively, of chapter seven hundred and seventy-nine of the acts of the year nineteen hundred and thirteen.

SECT. 2. The board of schoolhouse commissioners of the city of Boston may erect and furnish such school buildings upon land now owned by the city and now used for school purposes or otherwise, or said board of schoolhouse commissioners may cause to be taken, in the same manner in which land is taken for school purposes, land in said city to be occupied by said school buildings and shall construct and furnish such school buildings thereon.

SECT. 3. The school committee may adopt rules and regulations for the supervision and direction of such schools, and may also establish rules and regulations for placing children in such schools.

SECT. 4. Any attendance officer may apprehend and take to any such school without a warrant any habitual truant, absentee or school offender who has been placed in such school under rules and regulations established by the school committee relating thereto.

SECT. 5. Every person having under his control a child placed in any such school shall cause him to attend school as provided in the rules and regulations of the school committee, and if he fails to cause such child so to attend school he shall, upon complaint of an attendance officer and upon conviction thereof, be punished by a fine of not more than ten dollars. Whoever induces or attempts to induce a child to absent himself from any such school, or employs or harbors a child while such school is in session, shall be punished by a fine of not less than five nor more than twenty dollars.

SECT. 6. An inmate of any such school who persistently violates the reasonable regulations thereof, or who is generally of indecent or immoral conduct, or who otherwise grossly misbehaves, so as to render himself an unfit subject to attend such school, may, upon complaint by an attendance officer or by the officer in control of such school and conviction thereof, if under fifteen years of age, be committed to the Suffolk School for Boys: *provided, however*, that in no case shall the sentence be for a period of more than two years.

SECT. 7. All children confined in the parental school of the city of Boston at the date when the schools herein provided

for are established shall be transferred to the schools established by this act, and shall thereafter be required to attend such schools under the rules and regulations of the school committee.

SECT. 8. One year after the completion and opening of the schools provided for in this act, the city of Boston is hereby authorized to sell or otherwise dispose of or to transfer to any department of the city, to be used for municipal purposes, the land and buildings now occupied by the said parental school. Upon the sale or transfer of the property the parental school of the city of Boston shall be abolished, and said city of Boston and the county of Suffolk shall thereafter be exempt from the provisions of all laws relating to the maintenance of a county training school.

SECT. 9. All acts and parts of acts relating to the commitment of children to the parental school of the city of Boston are hereby repealed.

SECT. 10. This act shall take effect when the schools herein provided for are ready for occupancy. The school committee shall notify the mayor thereof, and the mayor may then issue his proclamation establishing such schools as disciplinary day schools.

[*Approved July 2, 1914.*]

CHAPTER 189 OF THE ACTS OF 1915.

AN ACT TO AUTHORIZE THE SCHOOL COMMITTEE OF THE CITY OF BOSTON TO CONDUCT COURSES FOR THE IMPROVEMENT OF TEACHERS.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may conduct courses for the improvement of teachers or others in its service, or for the training and qualification of persons who are or may become candidates for positions as teachers in special schools or subjects. The committee may employ such persons as it deems expedient in connection with the said courses, and may fix their compensation.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 22, 1915.*]

CHAPTER 304 OF THE ACTS OF 1915.

AN ACT RELATIVE TO THE PAYMENT OF PENSIONS TO MEMBERS OF THE
TEACHING AND SUPERVISING STAFF OF THE PUBLIC SCHOOLS OF THE
CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. Sections four and six of chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight, as amended by sections two and three of chapter six hundred and seventeen of the acts of the year nineteen hundred and ten, are hereby further amended by striking out the word "five", wherever it occurs in said sections, and inserting in place thereof the word:— seven,— and by striking out the words "purposes contemplated by this act", in the fifth line of said section four, and inserting in place thereof the words:— purpose of paying pensions at the rates already established by section seven of chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight, as amended by section three of chapter six hundred and seventeen of the acts of the year nineteen hundred and ten,— so as to read as follows:— *Section 4.* In addition to the amount which the school committee is now authorized by law to appropriate for the support of the public schools of the city, and for other purposes, it shall annually appropriate for the purpose of paying pensions at the rates already established by section seven of chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight, as amended by section three of chapter six hundred and seventeen of the acts of the year nineteen hundred and ten, and in the same manner in which it makes appropriations for other school purposes, the sum of seven cents upon each one thousand dollars of the valuation on which the appropriations of the city council of the city are based, and shall from time to time pay to the treasurer of the permanent pension fund such portions of the proceeds of said seven cents upon each one thousand dollars of the valuation aforesaid as, in the opinion of the school committee, will not be needed for the purpose of paying pensions to teachers during that year. Accrued interest not expended during any year shall be available for the payment of pensions during any subsequent year. *Section 6.* The total amount of pensions payable hereunder in any one year shall not exceed the proceeds of the said seven cents upon each one thousand dollars of the

valuation aforesaid, together with the accrued interest of the permanent fund. In case the amount available in any one year under this act is not sufficient to pay the pensions that have been granted, the amount so available shall be divided pro rata among those to whom pensions have been or may be granted on the basis of the amount of the pension each is then receiving: *provided*, that in no case, nor in any year, shall the pension of any person retired after thirty years of service be less than three hundred and twelve dollars.

SECT. 2. For the purposes of this act the limit of the amount of taxes on property in the city of Boston is increased two cents on each one thousand dollars of the valuation upon which the appropriations by the city council of the city are based.

SECT. 3. This act shall take effect upon its passage.

[*Approved April 27, 1915.*]

CHAPTER 86 OF THE SPECIAL ACTS OF 1916.

AN ACT RELATIVE TO THE USE OF PUBLIC SCHOOL PROPERTY OF THE CITY OF BOSTON FOR SOCIAL, CIVIC AND OTHER PURPOSES.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter one hundred and ninety-five of the acts of the year nineteen hundred and twelve, is hereby amended by striking out the words "that no admission fee is charged and", in the tenth line, so as to read as follows:— *Section 1.* For the purpose of promoting the usefulness of the public school property of the city of Boston, the school committee of that city may conduct such educational and recreative activities in or upon school property under its control, and shall allow the use thereof by individuals and associations, subject to such regulations as the school committee may establish, for such educational, recreative, social, civic, philanthropic and similar purposes as the committee may deem to be for the interest of the community: *provided*, that such use shall not interfere or be inconsistent with the use of the premises for school purposes.

SECT. 2. This act shall take effect upon its passage.

[*Approved February 16, 1916.*]

CHAPTER 257 OF THE SPECIAL ACTS OF 1916.

AN ACT RELATIVE TO THE RETIREMENT OF CERTAIN EMPLOYEES OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston may retire, with an annual pension, any janitor or attendance officer in the service of the schools who has reached the age of sixty years, after completing a period of not less than twenty-five years in the said service, and who has become physically incapacitated. Such pension shall be equal to one-half the compensation to which the pensioner would have been entitled for full employment during the last year of his service, but in no case shall it exceed three hundred and sixty dollars a year.

[Section 1 amended by chapter 146, Special Acts of 1917. See page 246.]

SECT. 2. The school committee of the city of Boston may annually allot from its appropriation for the support of the public schools the amount necessary to provide the pensions authorized by section one of this act.

SECT. 3. This act shall take effect upon its passage.

[*Approved April 15, 1916.*]

CHAPTER 267 OF THE SPECIAL ACTS OF 1916.

AN ACT RELATIVE TO SCHOOLS IN THE CITY OF BOSTON AND TO APPROPRIATIONS FROM TAXES FOR SCHOOL AND OTHER PURPOSES.

Be it enacted, etc., as follows:

SECTION 1. Section one of chapter four hundred of the acts of the year eighteen hundred and ninety-eight, as amended by section one of chapter four hundred and forty-eight of the acts of the year nineteen hundred and one, by section one of chapter one hundred and seventy of the acts of the year nineteen hundred and three, by section one of chapter two hundred and five of the acts of the year nineteen hundred and six, by section one of chapter three hundred and eighty-eight of the acts of the year nineteen hundred and nine, by section one of chapter seven hundred and eight of the acts of the year nineteen hundred and eleven and by section one of chapter six hundred and fifteen of the acts of the year nineteen hundred and thirteen, is hereby further amended by striking out the said section

and inserting in place thereof the following:—*Section 1.* The school committee of the city of Boston may in each year, by vote of four-fifths of all its members, taken by yeas and nays, make an appropriation in one sum for constructing and furnishing new school buildings, including the taking of land therefor and for school yards, and the preparing of school yards for use, and may also make an appropriation in one sum for repairs and alterations of school buildings, and furniture therefor, and may make such other appropriations by items for the support of the public schools as it deems necessary. The total amount thus to be appropriated for the public schools of the city and their support, in addition to the money which may be given therefor, the income collected, the balance of appropriations of preceding years, and the money which may be authorized by acts of the general court passed prior to the year nineteen hundred and sixteen and not repealed, shall not exceed the following sum, to wit:—for each financial year, beginning on the first day of February, nineteen hundred and sixteen, four dollars and thirty-five cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amounts which may so be raised shall be appropriated by the school committee as aforesaid and shall be a part of and shall be met by taxes within the tax limit; and of said amounts not more than sixty cents upon every such one thousand dollars shall be appropriated solely for new school buildings, lands, yards and furnishings as aforesaid, and not more than thirty-five cents upon every such one thousand dollars shall be appropriated solely for repairs and alterations of school buildings and for furniture therefor, including all necessary means and appliances for protection against fire.

SECT. 2. The taxes assessed in the city of Boston on property as provided by section fifty-three of Part I. of chapter four hundred and ninety of the acts of the year nineteen hundred and nine, as amended by section one of chapter five hundred and twenty-one of the acts of the year nineteen hundred and ten and by section eighteen of chapter seven hundred and nineteen of the acts of the year nineteen hundred and thirteen, and as provided by section two of chapter one hundred and eighty-four and by section two of chapter three hundred and four of the Special Acts of the year nineteen hundred and fifteen, shall not exceed eleven

dollars and two cents, instead of the amount provided for by said acts; *provided, however*, that an additional amount may be assessed whenever authorized by the general court for the reconstruction and repair of highways in said city.

[See, also, chapter 132, Special Acts of 1918, page 247.]

SECT. 3. Chapter three hundred and thirty-one of the acts of the year nineteen hundred and fourteen is hereby amended by striking out section one and inserting in place thereof the following:— *Section 1.* The school committee of the city of Boston for the purpose of acquiring a site for an administration building and constructing and furnishing such building, may appropriate by loan inside the debt limit a sum not exceeding three hundred thousand dollars.

SECT. 4. Said chapter three hundred and thirty-one is hereby amended by striking out section three and inserting in place thereof the following:— *Section 3.* The school committee shall sell the estate on Mason street now occupied by said committee for office and other purposes. The proceeds of such sale and of all sales hereafter made of school land or buildings shall be paid into the city treasury and applied to the cancellation or reduction of debt incurred for school purposes or for the administration building and the land used therefor, or applied to the payment of the interest and sinking fund charges of the said debt.

SECT. 5. Chapter four hundred and fifty of the acts of the year nineteen hundred and seven,¹ and section four of chapter three hundred and thirty-one of the acts of the year nineteen hundred and fourteen² are hereby repealed, and the borrowing capacity of the city of Boston within the statutory limit of indebtedness shall be reduced by the amount of five hundred thousand dollars.

SECT. 6. This act shall take effect upon its passage.

[*Approved April 24, 1916.*]

[Amended by chapter 132, Special Acts of 1918. See page 247.]

¹ An Act Relative to the Construction of Schoolhouses in the City of Boston.

² An Act to Provide for a School Administration Building in the City of Boston.

CHAPTER 146 OF THE SPECIAL ACTS OF 1917.

AN ACT RELATIVE TO THE RETIREMENT OF CERTAIN EMPLOYEES OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

Section one of chapter two hundred and fifty-seven of the Special Acts of the year nineteen hundred and sixteen is hereby amended by adding at the end thereof the following:—

and in the case of a janitor the rate of pension shall be based upon his net compensation as determined by the school committee,—so as to read as follows:—*Section 1.* The school committee of the city of Boston may retire, with an annual pension, any janitor or attendance officer in the service of the schools who has reached the age of sixty years, after completing a period of not less than twenty-five years in the said service, and who has become physically incapacitated. Such pension shall be equal to one-half the compensation to which the pensioner would have been entitled for full employment during the last year of his service, but in no case shall it exceed three hundred and sixty dollars a year, and in the case of a janitor the rate of pension shall be based upon his net compensation as determined by the school committee.

[*Approved February 28, 1917.*]

CHAPTER 327 OF THE SPECIAL ACTS OF 1917.

AN ACT TO EXEMPT FROM TAXATION THE PENSION AND ANNUITY FUNDS
FOR THE PUBLIC SCHOOL TEACHERS IN THE CITY OF BOSTON,
AND THE PENSIONS AND ANNUITIES PAID THEREFROM.

Be it enacted, etc., as follows:

SECTION 1. The pension and annuity funds provided for the public school teachers in the city of Boston by chapter two hundred and thirty-seven of the acts of the year nineteen hundred, and by chapter five hundred and eighty-nine of the acts of the year nineteen hundred and eight, and all acts in amendment thereof, so far as the same are invested in personal property, and the pensions or annuities paid from said funds to the beneficiaries thereunder shall be exempt from taxation. The provisions of chapter two hundred and sixty-nine of the General Acts of the year nineteen hundred and sixteen¹ shall not apply to the pension and annuity funds aforesaid, nor to the pensions or annuities paid therefrom.

SECT. 2. This act shall take effect upon its passage.

[*Approved May 14, 1917.*]

¹ An Act to Impose a Tax Upon the Income Received from Certain Forms of Intangible Property and from Trades and Professions.

CHAPTER 132 OF THE SPECIAL ACTS OF 1918.

AN ACT RELATIVE TO APPROPRIATIONS FOR SCHOOL PURPOSES IN THE CITY
OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The school committee of the city of Boston in each year, beginning with nineteen hundred and eighteen,

by vote of four-fifths of all its members, taken by yeas and nays, may appropriate in addition to what it is now by law authorized to appropriate for the maintenance and extension of the public schools and for the construction, furnishing, alteration and repair of school buildings and furniture therefor, for the taking of land for the same and for school yards, and for other school purposes, the further sum of seventeen cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based; and the amounts which may be so raised shall be appropriated by the school committee for the maintenance and extension of the public schools and for such other school purposes as said school committee deems necessary, and such additional appropriation shall be a part of and shall be met by taxes within the tax limit.

SECT. 2. In addition to the sums that the school committee of the city of Boston is now authorized by law to appropriate and the additional appropriation provided for in section one of this act for the purposes therein stated, the school committee of the city of Boston by vote of four-fifths of all its members taken by yeas and nays, is further authorized to appropriate the following sums, to wit:—for the financial year ending on the thirty-first day of January, nineteen hundred and nineteen, the sum of ten cents, for the financial year ending on the thirty-first day of January, nineteen hundred and twenty, the sum of forty cents, for the financial year ending on the thirty-first day of January, nineteen hundred and twenty-one, and for each financial year thereafter, the sum of fifty cents upon each one thousand dollars of the valuation on which the appropriations of the city council are based, and the amounts which may be so appropriated may be used by the school committee to increase the salaries of teachers, members of the supervising staff, janitors, attendance officers and other persons employed by the school committee, and such additional appropriation shall be a part of and shall be met by taxes within the tax limit.

SECT. 3. For the purposes of this act the limit of the amount of taxes on property in the city of Boston is increased in the year nineteen hundred and eighteen twenty-seven cents, in the year nineteen hundred and nineteen fifty-seven cents, in the year nineteen hundred and twenty and in

each year thereafter sixty-seven cents on each one thousand dollars of the valuation upon which the appropriations of the city council of the city of Boston are based.

SECT. 4. This act shall take effect upon its acceptance by the mayor, the city council, and the school committee of the city of Boston.

[Approved April 18, 1918.]

[Accepted by the mayor and city council May 1, 1918; accepted by the school committee May 6, 1918.]

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SCHOOL DOCUMENT NO. 6-1919
BOSTON PUBLIC SCHOOLS
LATIN, HIGH AND INDUSTRIAL SCHOOLS

WHAT THEY OFFER PUPILS FROM THE
ELEMENTARY AND INTERMEDIATE SCHOOLS



A GUIDE TO THE CHOICE OF A
SUITABLE SECONDARY SCHOOL

APRIL, 1919

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1919

INTRODUCTORY SUGGESTIONS.

EIGHTH AND NINTH GRADE PUPILS, READ THIS.

It will be of great advantage to you to secure the higher training provided by Latin, high, trade, continuation and clerical, or business schools. This has been demonstrated by a comparison of the record of the education of over 10,000 notable men in the United States with data contained in the United States Census and Reports of the United States Commissioner of Education. The study indicates that a boy with no education has practically no chance of becoming notable. A boy with only an elementary school education has but little chance to become notable. A boy with a high school training has twenty-two times as much chance to become notable as the boy with only an elementary school education. In industrial pursuits it has been shown that a young man with a trade education has a marked advantage over those who go to work without any trade training whatever.

Year by year the difference between the trained or untrained becomes wider. In the olden time it was not so necessary to have a higher education because there were not so many others getting it; therefore, one did not have to compete with so many people who had better training. He who goes out now to find his life work without training for it will find himself handicapped in competition with those who are really prepared. Stores and establishments of all sorts are recognizing that they can get more mature and better trained employees for positions of responsibility and good pay, and therefore there is smaller and smaller chance for those who are not sufficiently educated. Comparatively few places are now open to persons under sixteen years of age because it is recognized on all sides that children have no business to go into permanent work before they have some preparation for it.

This raises the question why we do not give training courses to children at an earlier age than we do in order to prepare them for profitable employment. The reason is that children under fourteen have not yet found themselves and cannot have much knowledge of what they are going to do, and therefore cannot prepare for it. They have been busy laying the foundations of an education that should be common to all. Upon this they will build the particular education for the kind of vocation for which they are adapted.

Again, the higher powers of the mind and the development of the body are not such in the tender years of childhood that the boy or girl should or could train effectively for the special work of life. It is of the utmost consequence to youth to have instruction and training from fourteen to sixteen years of age, and longer if possible. It is in the period from fourteen to eighteen that the brain reaches its full development and that the higher powers of the mind become mature enough for the youth to get his "bearings,"— his moral and spiritual bearings as well as his intellectual and

vocational bearings. It is a period of life that is so important that it is frequently called the "critical period," upon which one's whole career depends. If you lay well the foundations of character, knowledge and training throughout this period it will bear fruit a hundredfold in later years.

This is not idle talk. It is the accepted truth. This city is providing higher schooling for you that is costing it more than a million dollars a year. It is not doing this as a charity but as an investment that will bring rich returns in your higher character as a citizen and your greater economic efficiency. It is the purpose to give you an education, not that you may be able to live without work nor to work for yourself alone, but **that you may be able to work to better purpose and to be of greater service to your family, your city and your country.**

It is hoped that you will now avail yourself of your portion of this rich provision for your welfare in the spirit of the legend that is written on the gateway of one of our great colleges:

"So enter that you may be serious and thoughtful,
So depart that you may be of service to your fellowmen."

What we desire now is that you be serious and thoughtful in making up your mind as to what you are going to do and in choosing your higher course accordingly. We assume that you are going on to school, for even if you go to work you must now go to "Continuation School" until you are sixteen, but that is only four hours a week, and we hope you will not be satisfied with so small a share of the opportunities offered in this city.

You will never hear of anyone who thinks he has had too much education, but always of those who regret all their lives that they did not have better opportunities, or did not avail themselves of the opportunities they had in youth. This leads us to consider the wonderful opportunities that are offered in the City of Boston to any aspiring young person.

It is our intention to give adequate opportunity to all our people according to their needs and desires. If you wish to prepare for college or technical school we have the places in which you may do so to as good advantage as anywhere in the world. If you desire an art education we have an arrangement with the great art school of this city whereby you can secure both a high school education and vocational training in art. If your ambition is to become a teacher we have especially arranged courses in all our general high schools. If you aim to prepare for the directive places in industry or business we have schools especially designed for such purposes. If you prefer to prepare for trade occupations we have separate schools for girls and for boys and these schools have reputations that are nation wide. If you are better adapted for clerical positions we have a school designed for this distinct purpose, in addition to the commercial courses offered in each of our general high schools. If you desire to be a homemaker and to have a general knowledge of household arts, in addition to a liberal education, we have a school especially created with that end in view.

The probabilities are, however, that your local high school will afford you all the opportunities that you require. The local high schools are

just as well equipped and have just as efficient teachers for the general purposes of education as the other high schools, and unless you have a distinctive and special calling for which you desire to prepare, by all means go to your local high school.

The important thing now is for you to decide what sort of course you should elect. You can do this better while you are in the elementary school than you can next summer, for your teachers and principals will be able to advise you now as they cannot after school closes. It seems well, therefore, to insist that you all make up your minds,—first, that you are going on to school; second, that you definitely decide on the school that you are going to attend. It is to aid you in coming to a conclusion that this pamphlet has been prepared with the aid of the principals of the high and trade schools.

In every elementary and intermediate school there are “counselors” who are especially prepared to advise with you and your parents so that you may choose the type of high school best fitted to your needs and aptitudes. In all cases the approval of your parents in the choice of high school will be insisted upon, and cards will be given you which it is hoped you will fill out now with the greatest of care, thus preventing confusion upon the opening of our schools in September.

If this pamphlet does not give you the information you seek, your master or teacher, in fact, anyone in the school system, will be glad to explain the situation to you in further detail and to advise with you and your parents.

TEACHERS, READ THIS.

1. The attention of girls graduating from the eighth or ninth grades who desire to prepare for Normal School should be called to the necessity of taking piano lessons in case a kindergarten course is to be undertaken later in the Normal School. School credit is given for instrumental music taken outside of the high school. Particular attention should be called to the fact that our Normal School prepares directly for kindergarten teaching positions, for many have been led to believe that the Boston regulations require training in a private kindergarten preparatory school.

2. Students with marked artistic ability and who desire to specialize in art should have their attention called to the fact that they may take an afternoon course in the art school of the Museum of Fine Arts, for which credit is allowed in the Girls' Latin School, the High School of Practical Arts and in the general high schools, amounting to five points a year, toward graduation. Free scholarships are offered to those graduates whose work is approved by the Director of Manual Arts and the Director of the Educational Department of the Museum of Fine Arts. Graduates failing to secure such scholarships may take the course upon payment of the nominal fee of twenty-five dollars (\$25). Students attend five afternoons a week from October to June. Pupils interested should talk over the matter with their drawing teachers.

3. For those intending to take up music as a profession: The modern type of musicianship requires a broad and thorough general education. The elements that go to make up successful and intelligent musicianship are identical with those in other walks of life. To this end, pupils planning

to be professional musicians should take the college course with a view to attending college, at the same time pursuing so far as they are able the outside study of music, for which, in general high schools, they may receive credit toward a diploma.

Pupils desiring to avail themselves of the suggestion under either Notes 1, 2, or 3 should apprise the head master immediately on entering high school.

4. The commercial course in all general high schools has a threefold objective. Pupils in the third and fourth years of the high school course are asked to specialize in one of three commercial fields, which are as follows:

- a. Accounting or bookkeeping work.
- b. Stenographic or secretarial work.
- c. Salesmanship, retail selling or merchandising work. (See page 22.)

In accordance with the election of one or the other of these specialized fields, the pupil will be required to take certain subjects best adapted for obtaining the specialized end. Provision is made for pupils specializing in one field to elect subjects in another field, but pupils are expected to graduate from the high school with advanced training along one of the lines which may best be a life equipment for efficient service and for good wage returns.

Salesmanship or merchandising is the new commercial vocation which has come into high school organization during the last few years. Pupils may elect this work on the same basis as the older commercial subjects, such as bookkeeping and stenography. Part-time practice work in the stores is provided; teachers specially trained, and a coördinating director to guide practice work, have been secured. Through competent vocational guidance in the school, the pupil may at the end of the second year determine which one of the three commercial fields is best suited for his capacity and for attractive wage-earning possibilities.

5. The coöperative industrial courses in general high schools should be attractive to boys who are interested in the trades or in whose homes the economic demands are such that it is necessary for them to give early financial assistance. Opportunity is here offered to secure a high school education coincident with trade training for which compensation is given. These courses are proving of great value in holding the school interest of boys, and in enabling them to take an advanced standing in industry. (See page 21.)

A.—THE CENTRAL SCHOOLS.

There are eight central Latin and high schools. Six of these — Public Latin, Girls' Latin, English High, High School of Commerce, High School of Practical Arts and Mechanic Arts High School — accept pupils from all parts of the city up to the capacity of their housing accommodations. The Girls' High School receives pupils who reside in the City Proper, pupils electing courses not provided in their local high schools and others from the suburban areas up to the limit of its capacity. One of the eight central schools — the Roxbury High School — accepts pupils from any part of Roxbury, from portions of Dorchester and West Roxbury, and overflow classes from the Girls' High. The locations of the central schools are as follows:

1. Public Latin School (Boys), Warren avenue and Dartmouth street, South End.
2. Girls' Latin School (Girls), Huntington avenue, near Longwood avenue, Fenway.
3. English High School (Boys), Montgomery street, South End.
4. Girls' High School (Girls), West Newton street, South End.
5. High School of Commerce (Boys), Avenue Louis Pasteur, Fenway.
6. High School of Practical Arts (Girls), Winthrop and Greenville streets, Roxbury.
7. Mechanic Arts High School (Boys), Belvidere and Dalton streets, Back Bay.
8. Roxbury High School (Girls), Warren and Montrose streets, Roxbury.

COÖPERATIVE INDUSTRIAL COURSES.

In addition to the central schools, pupils are admitted from all parts of the city to the special coöperative industrial courses in the Brighton, East Boston, Charlestown, Dorchester and Hyde Park High Schools and to the special coöperative agricultural course in the West Roxbury High School (for description see page 21).

PUBLIC LATIN SCHOOL.

This school, the first and for nearly half a century the only public school in the town of Boston, was established April 23, 1635. From the earliest times it has been a school for higher instruction, its purpose being especially to prepare boys for college through the medium of the Greek and Latin classics, and it is therefore open only to boys whose parents or guardians present a written statement of their intention to give such pupils a collegiate education. This school for many years has been the largest single source of supply to Harvard College. The course of study, which is arranged with the requirements of the best colleges distinctly in view, includes English, Greek or German, Latin, French, history, mathematics and

physics. The boy who is expecting to enter one of the learned professions, such as law, medicine, education, theology, or any other occupation in which the literary note is dominant will find his needs well served in this school. The aim of the school is to give real mastery of a very few fundamentals and the power to think and to work. The boy who completes its courses knows how to study.

The school has two distinct courses: One, four years in length for elementary school graduates, and the other six years in length for those who enter earlier. Graduates of the elementary schools of Boston are admitted to the four-year course without examination. If of good abilities and of firm resolution they may expect to graduate in that length of time. Boys may also enter who are well prepared to enter Grade VII. of the elementary schools, and boys are likely to be better prepared for college by entering the Public Latin School at that period than by remaining at the elementary school to graduate.

Candidates for this school from intermediate schools should enter at the end of the sixth grade, since the intermediate school does not attempt at present to duplicate the course in Latin in the Latin Schools. A transfer at the end of the eighth grade makes a serious break in the continuity of the intermediate school work, while a pupil entering a Latin school from the ninth grade is likely to require four years more to complete the course. Sixth grade pupils who are unable to enter the Latin Schools directly from grade six, but who know that they will wish to enter from the seventh or eighth grades, should signify their intention at this time in order that their personal programs may be adjusted, in so far as possible, to meet the requirements of the Latin Schools, and in order that they may be assured of the opportunity to transfer at the desired time.

Examinations of candidates for admission are held in the school building on the first Friday in June and on the Tuesday preceding the second Wednesday in September in each year, but boys who have been promoted to the seventh or higher grade will be admitted without examination, *provided*, their school record shows an average of not more than 2 in arithmetic, geography, reading, writing, composition and spelling.

Formal reports of the scholarship and deportment of the pupils are made to their parents monthly, and suggestions from parents, either personally or by letter, as to the character and treatment of their sons are gratefully received.

The school is located on Warren avenue in the South End.

GIRLS' LATIN SCHOOL.

Under the regulations of the School Committee the Girls' Latin School is open only to girls who present a written statement from their parents or guardians that it is their intention to give them a college education. This makes it clear that the Girls' Latin School is maintained for the express purpose of fitting girls for admission to college. Only those girls, therefore, who are intending to enter college and who are willing to undertake the serious and somewhat difficult task of meeting the college entrance requirements should elect to enter this school.

The subjects of instruction, which are determined by the admission requirements of our leading colleges, include Latin, Greek, English, French,

German, history, mathematics and science. Candidates who are aiming at a professional career or who desire to fit themselves for higher technical or vocational training will find the best possible preparation in the Latin School.

There is no distinctly preparatory course for the Normal School but the Normal School receives graduates of the Girls' Latin School.

There are two regular courses of study: One, covering a four-year period, designed for the graduates of the public elementary schools; the other, covering a six-year period, open to pupils who have been promoted to the seventh or a higher grade. The work of both these courses has been so planned as to be within the grasp of pupils of moderate ability who enter fully prepared and firmly resolved to subordinate other interests to their school duties. Such pupils may expect, by the exercise of reasonable diligence in their studies, to graduate within the prescribed time. Girls who are otherwise fitted for the studies of the Latin School but who are young or delicate in health, and hence irregular in attendance, should expect to spend an additional year in completing their preparation for college.

Candidates for this school from intermediate schools should enter at the end of the sixth grade, since the intermediate school does not attempt at present to duplicate the course in Latin in the Latin Schools. A transfer at the end of the eighth grade makes a serious break in the continuity of the intermediate school work, while a pupil entering the Latin Schools from the ninth grade is likely to require four years more to complete the course. Sixth grade pupils who are unable to enter the Latin Schools directly from grade six, but who know that they will wish to enter from the seventh or the eighth grades, should signify their intention at this time in order that their personal programs may be adjusted, in so far as possible, to meet the requirements of the Latin Schools, and in order that they may be assured of the opportunity to transfer at the desired time.

Examinations of candidates for admission are held in the Girls' Latin School building on the first Friday in June and on the Tuesday preceding the second Wednesday in September, but girls who have been promoted to the seventh or higher grade and who present evidence of satisfactory scholarship in the school last attended will be admitted without examination. This scholarship requirement is met by a school record, during the year preceding admission, which averages not more than 2 in arithmetic, geography, reading, writing, composition and spelling.

The school is located at the corner of Huntington avenue and the Fenway, near Longwood avenue.

ENGLISH HIGH SCHOOL.

The English High School is a general high school for boys. It receives pupils who reside within the limits of the city proper, and other pupils in the order of application until the seating capacity of the school is exhausted. Pupils of the same year in school are grouped in the same rooms, but there are no other distinctions of class. The individual is the unit. Each pupil has a program made to meet his needs, and promotions are by subjects and not by courses. A few studies are required and pupils taking a foreign language are generally required to continue it at least two years.

With these exceptions a pupil may choose his own studies, subject to the advice and approval of his teacher, whose duty it is to see that each program is consistent and has a definite objective. About one third of the graduates continue their studies in higher institutions and those who do their school work well find themselves well prepared for advanced work.

The English High School is not distinctively a fitting school, and gives no more attention and no better opportunities to boys fitting for college than to those preparing for scientific study or business life; but the efficiency of its work is indicated by the standing in college work of that portion of its graduates who do go to college and who while in this school recite their English, modern languages, mathematics, science, etc., in the same classes with those who are not going to college.

The English High School has proved exceptionally successful in preparing boys to enter the Massachusetts Institute of Technology. The school has no shop work.

CHOICE OF STUDIES.

Recommendations.

Pupils preparing for Harvard College should take during the first year English, ancient history, French and algebra. Twenty periods, twenty points.

Pupils preparing for the Massachusetts Institute of Technology should take during the first year English, French, algebra and botany. Twenty periods, nineteen points.

Pupils preparing for a business career should lay the broadest possible foundation for that career by electing, in addition to purely commercial studies, subjects that will tend to discipline their minds and broaden their outlook upon life. They are recommended to take during the first year elementary science, bookkeeping and either a modern language, or history of Boston. English is required. Twenty periods, nineteen points.

The main building of the school is located on Montgomery street, in the South End. The first year classes are housed in the Patrick A. Collins building, one of the group of school buildings known as the "Normal Group," on Worthington street, off Huntington avenue, Fenway, and a portion of the second year classes are in the Franklin Union, on Berkeley street.

GIRLS' HIGH SCHOOL.

The Girls' High School receives pupils from the city proper and from all suburban districts up to the limit of its capacity. It has been able for several years past to accommodate all applicants and it particularly meets the needs of parents who desire their daughters to attend a single sex school. The school has always had a large college preparatory department and it also makes a specialty of fitting pupils for Normal Schools.

The Girls' High School offers four courses of study as outlined below. Applicants are asked to indicate upon the back of their admission cards the course of study and foreign language desired.

COLLEGE COURSE.

The school fits not only for such standard colleges as Radcliffe, Wellesley and Smith, but for such special institutions as Simmons College,

the Normal Art School, the Normal School of Gymnastics and the Institute of Technology. The freedom in election of work makes it possible for pupils not now certain as to their college prospects to change to a college course in later years. The first year's work recommended for this course includes English, Latin, algebra and ancient history.

NORMAL SCHOOL COURSE.

This course is prescribed by the Board of Superintendents. Since only pupils receiving a rank of at least B are certificated to the Normal School, and since the course is one of the hardest in the school, only pupils of good ability are advised to elect it. The first year's work recommended for this course includes English, a foreign language (French, Latin, Spanish or German), algebra and ancient history.

This course fits pupils for the Boston Normal School and for any of the State Normal Schools.

COMMERCIAL COURSE.

This course offers not alone subjects of a purely business nature, but great freedom in the choice of other subjects. Teachers are advised to present to their pupils the advantages, even for business purposes, of a broad course of this kind over the shorter courses offered by business colleges. The first year's work recommended for this course includes English, a foreign language (Latin, French, German, Spanish), bookkeeping and English history. In its third and fourth years this course offers special instruction designed to fit pupils for one of three kinds of work, stenography, bookkeeping and retail selling or salesmanship, as outlined under paragraph 4, page 6, of this pamphlet.

GENERAL COURSE.

This course is designed for pupils who do not desire any of the other courses. For the first year the course recommended is the same as the Normal course, but in subsequent years anything offered in the entire course of study may be elected, due regard being given to the requirements for a diploma.

The school is located on West Newton street, between Tremont street and Shawmut avenue, South End.

HIGH SCHOOL OF COMMERCE.

The distinctive aim of the High School of Commerce is to train boys for business life. To accomplish this end, the school works in two ways. First, it provides instruction in the history, conditions and principles of business; second, it provides opportunity for practical experience through aiding the boy to secure work at the Christmas season, during the summer vacation, and at various other periods of the year. In order that each individual may be specially fitted to take a definite place in the world of commerce, the pupil is asked to choose, at the end of the second year, one of three courses. These courses are as follows: The merchandising (buying and selling), the clerical (emphasizing stenography), and the accounting course. Thus at the end of four years a boy knows a great deal about the essentials of business; he knows enough about some side of business activity to be of immediate use to his employer; and he has had sufficient practical

experience to enable him to make an intelligent choice of the type of career for which he is best fitted, thus guarding against the mistakes so likely to attend complete inexperience.

During the first year a boy studies the following subjects: English, modern language (German, Spanish or French), elementary bookkeeping, general science, mathematics (commercial arithmetic and algebra). During the second year he continues all these studies with the exception of general science. In its place he takes economic history and geography. He also begins typewriting. At the end of the second year he chooses one of the three courses already referred to, *i. e.*, secretarial, merchandising or accounting. Separate programs of study have been provided for these different courses, so that a boy will be well fitted to take up the particular department of business activity for which he chooses to prepare.

Throughout the four years, regular class work is supplemented by talks given weekly by business men.

The school is not narrowly vocational. Here, as in the general high school, the pupil is taught to appreciate the higher ideals and developments of modern civilization; he is trained to be not only a business man but an educated and useful citizen. For boys specially gifted, the school makes additional provision by fostering various activities, represented by the orchestra, the bands, the glee club, the debating societies, the school magazine and the athletic association.

In no sense is the High School of Commerce a preparatory school for higher institutions; neither is it of the strictly clerical type. It trains boys to become practical, energetic men of business and intelligent, well-behaved members of society.

Any elementary school graduate who is ambitious to enter business life directly from high school should consider the aim, resources and advantages of the school. The opportunities in business are many and varied. There is always a great demand for boys with good school records who have specific business training. The constant aim of the school is to make it of as much value as possible to its pupils and to the business men of the city.

The school is located in the Fenway, on Avenue Louis Pasteur, near Longwood avenue.

HIGH SCHOOL OF PRACTICAL ARTS.

The High School of Practical Arts offers a general high school course together with highly specialized vocational training in domestic science, dressmaking, millinery, retail selling, drawing and design. A course in telegraphy has been added during the last year.

While the school does not attempt to prepare for college, its graduates are admitted to all the state normal schools. Many of them enter the Framingham Normal School and the Normal Art School in Boston. The school does not offer foreign languages or strictly commercial branches.

The course of study includes the following subjects: English, history, civics and current events, economics, mathematics, chemistry and physics, physiology, hygiene, sanitation and home nursing, drawing, interior decoration, illustrating, lettering, costume design, domestic science,

cooking, housekeeping, food study, marketing, household accounts, dressmaking, millinery, textiles, retail selling, telegraphy, choral practice, and physical training.

During the first year the course is the same for all pupils. There are thirty periods per week of forty-two minutes each, divided as follows: English, 4; history, 4; mathematics, 2; elementary science, 2; art, 4; sewing, 6; cooking and housekeeping, 4; choral practice, 1; physical training, 2; study, 1.

At the end of the first year pupils are required to choose one of the following vocational courses: Domestic science, dressmaking, millinery, retail selling, drawing and design, telegraphy.

In the department of domestic science instruction is given in selecting, purchasing and preparing foods, food values, invalid cookery, the planning and furnishing of a house, the care of the home, and laundry work.

In the industrial department pupils are trained to enter one of the above-named vocations. In the dressmaking trade they are taught the drafting, cutting, fitting and making of clothing. In the millinery trade they are taught all the processes of making hats, and turn out a marketable product. During the fourth year they are engaged on order work in school and are sent to work in shops for practical experience.

The course in drawing and design prepares pupils for further study in art schools. The course in retail selling offers training for those who will seek employment in stores. Practical experience is gained by actual work in stores during the third and fourth years. (See page 22.)

During the school course the pupils have the advice of a teacher known as the "vocational assistant." This teacher looks after those who are working part time in the trades, and also helps to secure positions for graduates, or for those who leave school before graduation, and keeps in touch with them until they are permanently established.

The school is located at the corner of Winthrop and Greenville streets, near Dudley Street Terminal.

MECHANIC ARTS HIGH SCHOOL.

Important changes in the course of study for this school are under consideration. A special leaflet will be issued.

The school is located at the corner of Dalton and Belvidere streets.

ROXBURY HIGH SCHOOL.

The Roxbury High School is a **general high school and is for girls only**. Its large building is well equipped for the four courses it offers, and its walls are attractively hung with fine pictures, gifts of former classes.

Nearly all of the subjects taught in the school are elective. Each pupil is required, however, to take English and physical training for four years. A large airy gymnasium on the third floor is in almost constant use by classes in calisthenics and apparatus work, and two teachers, together with the school physician, watch over the physical needs of the pupils. Other required subjects are, for one year each, history, science, mathematics or bookkeeping, hygiene, and choral practice. Three large laboratories provide ample opportunity for extensive work in science. The school has an

excellent library. Phonography and typewriting or a foreign language must be pursued until seven points are obtained.

If a pupil elects the college course she must follow, in addition to these, whatever subjects are required for admission to the college selected. Preparation is offered for any of the women's colleges. Pupils may prepare to enter Simmons College for the secretarial course, the library course or the domestic science course. Faculty advisers stand ready to offer assistance and advice in shaping proper programs.

The Normal course fits girls to enter the Boston Normal School or any of the state normal schools, if they desire to qualify for the teaching profession. In this course, also, the requirements are more numerous than those given above for candidates for a diploma. Latin or a modern language must be studied four years.

Girls may select the general course who do not aim at any of the goals described for the other three courses, or who desire to lay a broad foundation of information and experience before beginning specialized vocational training. A foreign language for four years is required and the opportunities for election of subjects are limited to such subjects as are not vocational.

The commercial course of four years aims to equip each pupil with such information, habits and skill as will enable her to enter commercial employment and adapt herself readily to the requirements of her position. In the second year bookkeeping and commercial geography are required. In the third year pupils begin to specialize along one of three lines: Accounting, secretarial, merchandising; and their election among these groups is carried through the fourth year. Each group requires the fullest vocational preparation for success in that special line. It is possible for a pupil to carry two of these lines simultaneously, as major and minor. Retail selling of merchandising affords opportunities for studying store systems and salesmanship. In connection with this subject girls are allowed actual experience in stores. (See page 22.)

Skill in the use of vocational subjects depends upon the energy and faithfulness with which they are practiced. Pupils who graduate with a mark not less than B in a full commercial course are granted in addition to their diploma, a certificate stating that they have attained a high degree of skill in commercial lines.

The school is located in two buildings,—one at the corner of Warren and Montrose streets, near the Dudley Street Terminal, and the other nearby on Perrin street.

B—THE SUBURBAN SCHOOLS.

GENERAL EXPLANATION.

The so-called suburban high schools, a list of which follows, are coeducational and are designed to provide a neighborhood school for the districts in which they are severally located. They possess the general advantage that a pupil may attend them without the expense and discomfort of street car travel, and in this way they also save time that can be profitably devoted either to the preparation of school work or to healthful outdoor exercise.

These schools offer elective courses in foreign languages, including Latin; in mathematics (algebra and geometry); in science (biology, chemistry and physics); in the clerical arts (bookkeeping, phonography and typewriting); in history; in drawing; in commercial geography; in commercial law; and in economics. Physical training is required of the girls attending these schools, and physical training, including military drill, is required of the boys. English is required of every pupil for the first three years at least.

They prepare pupils for college, for the Institute of Technology, and for the Boston Normal School. Many pupils, however, get the last of their school education in these schools, and enter business life immediately after graduation. For these pupils courses are provided that will enable them to succeed in office work, in retail selling for girls and in some cases in mechanical or secretarial positions. An effort is made to give to every pupil who comes to them some work that will be of advantage, even if the pupil stays not more than one year. Eighty points are required for graduation.

The descriptions of the individual suburban schools vary somewhat, still the schools are substantially alike in most respects, both as to the courses offered and the quality of instruction. They are of equal rank and worth in all essential particulars. A careful reading of the matter under all of the suburban schools will give a good idea of the general purpose of each.

There are seven suburban high schools as follows:

1. Brighton High School, Cambridge and Warren streets.

Pupils are admitted from Allston and Brighton; and to the coöperative industrial course from any part of the city.

2. Charlestown High School, Monument square.

Pupils are admitted from Charlestown, North and West Ends; and to the coöperative industrial course from any part of the city.

3. Dorchester High School, Talbot avenue and Washington street.

Pupils are admitted from Dorchester and to the coöperative industrial course from any part of the city.

4. East Boston High School, Marion street, between Princeton and Saratoga streets.

Pupils are admitted from East Boston; and to the coöperative industrial course from any part of the city.

5. Hyde Park High School, Harvard avenue and Everett street.
Pupils are admitted from Hyde Park, West Roxbury and parts of Dorchester; and to the coöperative industrial course from any part of the city.
6. South Boston High School, Thomas park.
Pupils are admitted from South Boston and parts of Dorchester.
7. West Roxbury High School, Elm street, opposite Greenough avenue, Jamaica Plain.
Pupils are admitted from West Roxbury, Roslindale, Jamaica Plain and parts of Roxbury; and to the coöperative agricultural course from any part of the city.

BRIGHTON HIGH SCHOOL.

The Brighton High School was founded in 1841 and is, consequently, one of the oldest high schools in the country. The school is coeducational and the courses are adapted to the needs of the pupils of the Brighton District of Boston, being as follows:

1. The College Course, which fits for all colleges. Graduates of this course have attended Harvard, Yale, Dartmouth, Colby, Tufts, Boston University, Boston College, Holy Cross, Wellesley, Smith, Radcliffe, Mount Holyoke, Vassar, Leland Standord, Jr., Chicago. Trinity, Massachusetts Agricultural College and others.
2. The Technical Preparatory Course, which fits for the Massachusetts Institute of Technology and other scientific schools.
3. The Normal School Preparatory Course, which fits for the Boston Normal School and the Massachusetts State Normal Schools.
4. The Coöperative Industrial Course, which fits boys for effective work in the woodworking industries, giving them valuable experience in shopwork. (See page 21.)
5. The General Course, which is well adapted to the needs of pupils who desire to attend such professional schools as do not require a preliminary college training or to complete their academic education in the high school.
6. Commercial Courses, which furnish adequate preparation for business life.

The Brighton High School has a desirable location, a fine building, modern laboratories, gymnasium, assembly hall, and commercial rooms. The loyalty of alumni and friends has decorated the building with an unusual number of casts and pictures. The school has an enviable record in military drill, having in competition with other high schools won thirty-four banners for excellence in this subject.

CHARLESTOWN HIGH SCHOOL.

The Charlestown High School location is central, within walking distance of all homes, close to the Charlestown Branch of the Boston Public Library, and not far from the city playgrounds available for athletic purposes.

The school has a healthful site, high elevation, and an abundance of

fresh air and light. The building was first occupied in 1907, and it has well ventilated rooms, broad corridors and stairways of fireproof construction.

There is a large assembly hall of unusual beauty, already notable among school buildings for the decorative painting that adorns the wall of the stage. There is a library containing a collection of books, made by public subscription in days when Charlestown was an independent municipality. There are also a gymnasium with locker rooms and shower baths, scientific laboratories, a room for art instruction, and a shop for handicraft, together with special rooms for commercial subjects, all completely equipped.

The school offers the usual courses of instruction of a general high school, but emphasizes three in particular.

(1.) Commercial Course, for boys and girls. Many of the teachers have had practical experience in business. Salesmanship is taught in the fourth year by coöperation with large department stores. At the end of the second year promising pupils (girls) may enter the Boston Clerical School.

(2.) Normal School Course, for girls. A large percentage of the teachers of the school are graduates of the Boston Normal School and have remained in close touch with it.

A course in domestic science or "home-making" is also given. This course includes lessons on house decoration and furnishings; home sanitation; household accounts; menu work, and the cooking and serving of foods in large quantities.

(3.) Coöperate Industrial Course, for boys (see page 21), preparing for the electrical trades. A pupil with a good record in the elementary school may expect to succeed in this course without difficulty. Those who complete the course creditably may expect steady and remunerative employment.

The general advantages claimed for the district high school are set forth elsewhere. The Charlestown High School draws its pupils from the local elementary schools, with which it seeks to coöperate. It is easily possible for parents to visit the school, which they are urgently invited to do, in order that every effort may be made to help their children. The school hopes, because of the compactness of its membership, to reach the individual student.

DORCHESTER HIGH SCHOOL.

The Dorchester High School seeks to provide a secondary education for boys and girls of Dorchester. It is a comprehensive high school and aims to meet local conditions by a broad range of courses leading to specific ends. These courses each require four years of school work and are as follows:

A course for colleges and scientific schools, a normal school course, a liberal or general course, a course in art and design, a manual training course, a commercial course and a coöperative industrial course preparing for the woodworking trades. (See page 21.)

The school prepares pupils for and sends them to all the leading colleges and scientific schools by certificate or examination. It fits for the Boston and other Normal schools. It offers a liberal education for pupils who are to complete their studies in the high school. It offers an opportunity for

girls to become proficient in the domestic arts and the boys to become skilled mechanics. It presents a highly developed and well equipped commercial course, giving intensive work in salesmanship, stenography, typewriting and accounting. It has a vocational guidance system to direct pupils into channels best suited to their abilities. It has a clerical bureau which is in close contact with the wholesale and retail houses and secures good positions for graduates of the commercial and salesmanship courses. It has a follow-up system which keeps in touch with and assists former pupils. Each course in the school offers a thorough training in its line.

The school building is one of the largest and best equipped for its work of any in the city, especially in the commercial department. The manual training and domestic art departments have received large additional equipment to meet the growing needs. The school has a physical, a chemical and a zoological laboratory for teaching the different branches of science. The building is so situated that it has plenty of room, light and fresh air. It has four rooms equipped for wood and metal work and three rooms especially fitted for practical arts. In the latter course are taught designing, pattern making and the completion of outfits for women.

The school provides for the physical needs of its pupils. It has drill and physical exercises for the boys and physical training for the girls as a part of their school course. It has a large athletic field for the use of its pupils.

Its peculiar advantage to its constituents is that it offers to the community of Dorchester all the educational opportunity that any general high school in the city can offer. It is within easy access of all parts of Dorchester. It eliminates the long car rides, the car fares and the dangers and temptations to boys and girls who are obliged to go into the city every day. It economizes the time of the pupils and enables them to put upon their studies the time which would be lost in going to and from the city. It gives the parents an opportunity to educate their children under their own eyes, it invites personal conference with parents, and frequent visits of parents. It is preeminently a school for Dorchester.

EAST BOSTON HIGH SCHOOL.

The East Boston High School is a "Comprehensive" high school, as distinct from the special schools, in that it offers under one administration a number of widely varying courses, all of which are designed to meet the individual present-day needs of the young people of the community. The school offers the following courses of four years each:

COLLEGE COURSE.

This should be elected by those intending to seek a professional career. Its preparation for college is adequate — so proved by the success of its graduates in various colleges. The school has certificate rights from the New England College Entrance Certificate Board. Pupils who maintain a standing above C (passable) may receive certificates which exempt them from examinations for admission to colleges in New England, excepting Harvard, Yale and the Massachusetts Institute of Technology, which require examinations from all secondary schools.

NORMAL COURSE.

This should be chosen by those wishing to teach in the grade schools of the city, including the kindergarten. Vocational advisers in the elementary schools would do well to stimulate the taking of this course by the more gifted pupils of their classes.

COMMERCIAL COURSE.

This should be chosen by those who wish to prepare for a business career along the main lines of bookkeeping, shorthand and typewriting and salesmanship or retail selling. The opportunities for a livelihood in each of the first two lines is well known. It is not so well known, that as great an opportunity exists in salesmanship. (See page 22.) Vocational advisers in the elementary schools should acquaint themselves with the present-day opportunities in business by communicating with the director of salesmanship, at Mason street, or the teacher of the course at the high school. A variety of machines has been added to the equipment of the commercial department. Instruction in operating the dictaphone, the neostyle, the multigraph, calculating machines, etc., is an important part of the course.

COÖPERATIVE INDUSTRIAL COURSE.

This should appeal to boys wishing to enter the metal working trades or to specialize in mechanical drawing and drafting. (See page 21.) Attention is called to the advantage which this course offers in comparison with industrial courses in trade schools where the course is two years only; the high school industrial course allowing the broader academic training.

GENERAL COURSE.

This may be selected by the boy or girl who does not desire any of the special courses described.

So much for the courses, but finally the administration of the school, while aiming to register in the work of the school all approved present-day methods as adapted to this community, still emphasizes the purpose of the schools as expressed by our forefathers in the Constitution of Massachusetts: "To impress upon children and youth the virtues which are the ornament of human society, and the basis upon which a republican constitution is founded."

HYDE PARK HIGH SCHOOL.

This school offers courses fitting for all colleges, for the Massachusetts Institute of Technology and for the Normal Schools. There is a commercial department and an industrial course for boys. In all the courses, as far as is practical, the boys and girls are taught in separate divisions.

The commercial department offers four years of bookkeeping, three years of typewriting, and two years of shorthand, also one year of salesmanship.

The classes in household science and arts are open to girls enrolled in the commercial course.

The course in household science and arts comprises work in home-making. In this course are studied cooking, including market prices and

supplies; food values; menu work; household accounts; house furnishings; lighting; heating; ventilation and the care of the home; sewing, including the study of textiles; cost of materials, planning and making of clothing.

The coöperative industrial course prepares for the metal working trades. (See page 21.) "The pupils in this course have access to a well equipped drafting room, also machine shop and woodworking shop. Their recitations in academic subjects are conducted by the same teachers who conduct similar classes in the other courses."

SOUTH BOSTON HIGH SCHOOL.

The South Boston High School, besides the required courses in English and in physical training, offers elective courses in two languages (French and Spanish); in mathematics (algebra, plane and solid geometry); in science (biology, chemistry and physics); in the clerical arts (book-keeping, phonography and typewriting); in history; in commercial geography, commercial law, economics, retail selling or salesmanship and textiles (see page 22); in choral practice; and in various kinds of drawing (the course in drawing being closely correlated with the work in other departments).

While it fits girls for Normal School, most of its pupils make use of it as a finishing school, expecting to enter business life immediately after their high school course. Effort is constantly directed, and will continue to be directed, not only to fit these pupils for efficient service in business, but to place them advantageously when they leave school. The courses, however, in the school amply meet the new proposed college entrance requirements for colleges which are willing to accept pupils without Latin.

WEST ROXBURY HIGH SCHOOL.

This school seeks to meet the needs of the community through several courses, each of which, though directed towards its specific purpose, considers the social, the cultural and the vocational needs of the pupil.

The college and the technology courses are for those who purpose to supplement their high school work with four years of college. Pupils who elect this course without intending to go to college are unlikely to bring to their work the determination or loyalty needful to success.

The normal course, as formulated by the Board of Superintendents, prepares girls to enter the Boston Normal School. As Boston desires the best possible young women as teachers in its elementary schools, a high standard is required of all girls in the normal course. Girls of mediocre ability cannot expect to complete the course in the usual four years. Only girls physically strong and free from impediments of speech should elect this course.

The general course prepares boys and girls for the State Normal Schools, the Normal Art School and agricultural colleges. Including as it does instruction in manual training, domestic science and household arts, it is particularly adapted to those who expect to make the home the center of their interests.

The commercial course fits boys and girls to take places in the business world as soon as they graduate. Besides training pupils to be clerks,

stenographers and bookkeepers the school offers a course in salesmanship and textiles for girls and in advertising and salesmanship for boys.

The coöperative agricultural course for boys is offered to a limited number of elementary school graduates (fourteen years of age) and also to pupils who have completed one year of high school work. No pupil who has not already shown an aptitude for some form of agricultural work should choose this course. As West Roxbury is the only Boston high school offering agriculture, pupils may enter from any part of the city.

The growing demand for this type of education has been already noted, especially in the garden work here in Boston. There are many opportunities for the trained agriculturist. Some of the lines of activity which require a practical scientific knowledge of agriculture are: Managers of estates, forestry nursery work, landscape gardening, floriculture, poultry husbandry, fruit orcharding, market gardening, greenhouse and truck farming.

Pupils cover the fundamental principles underlying the above lines of activities. All other subjects in the course, such as English, mathematics, history, physics, woodworking, etc., will be tied up with the agricultural work. Afternoons will be devoted to working on estates, in greenhouses, in Franklin Park, etc., where the pupil will put into actual practice, under the direction of experienced employees, the work covered in the schoolroom. For this work payment will be made. Pupils will carry on agricultural work during the summer vacation in positions which the department will secure.

Thus these pupils will get a good agricultural training to fit them for future positions. Pupils who desire to enter higher agricultural institutions will have an opportunity to take a course especially adapted to this end.

COÖPERATIVE COURSES.

I. AGRICULTURAL.—This course is offered only in the West Roxbury High School. (See above for description.) Pupils are admitted for this course from any part of the city.

II. INDUSTRIAL.—These courses are now offered in suburban high schools as follows:

Brighton High School, preparing for positions in woodworking and closely allied industries, such as carpentry, cabinet and furniture making, pattern making and foundry practice, boat building, drafting.

Charlestown High School, preparing for positions in the electrical industries.

Dorchester High School. (Same as Brighton High School.)

East Boston High School, preparing for positions in the metal working and closely allied industries such as machine shop practice, sheet metal work, pattern making, foundry practice, electrical work, drafting.

Hyde Park High School. (Same as East Boston High School.)

These courses are for boys who wish to learn a trade and for those who through trade training wish to prepare themselves for responsible positions in, or in connection with, the industries.

There are many excellent opportunities available for boys who are earnest in their efforts and ambitious enough to study faithfully in school

and work conscientiously in the shops, and who can also be depended upon to conform absolutely to all school and shop regulations.

The course includes the subjects of English; civil government; industrial mathematics, history, geography and science; school shop work and drawing; physical training or military drill; and hygiene with the option, in addition, of choral practice.

The entire first year is spent in school with visits to local industrial establishments. Each boy makes his choice of a trade and a position is found for him in such establishments and as near the boy's home as possible.

The pupil works in this position during part or all of the summer vacations and during alternate weeks the second, third and fourth years at regular apprenticeship wages and under the careful supervision of the shop foreman and a "coördinating" high school instructor. He spends the other weeks in the high school. After the fourth year the pupil's whole time is devoted to work at his trade under the supervision above referred to and a diploma is granted upon the completion of the required number of apprenticeship hours. This requirement, in most shops, is much less in the case of boys in coöperative courses, and is generally reached about the end of the first year out of school, when the pupil becomes a journeyman on full pay.

Pupils are admitted to these courses in the high schools where such courses are offered, from any part of the city.

III. RETAIL SELLING.—Do you realize the number and variety of positions in the field of retail distribution? For groceries, provisions, furniture, clothing, shoes, books, drugs, leather goods, confectionery, millinery, hardware, in fact, to satisfy any one of our every day needs, we must call upon the retail stores to serve us. The market, department store, specialty shop, mail order house, general store, and small local store, all suggest the wide range of opportunities open to those who are qualified to meet the demand.

The retail selling course makes it possible for you to get the specialized training which is necessary for success in this field.

The course in retail selling is an elective covering two years' work beginning with the third year of high school. The subjects covered are merchandise, salesmanship, store organization, system, arithmetic, English, color and design, and personal hygiene.

In the third year store organization is studied in order to point out the possibilities for promotion. A pupil showing ability and interest in working with people can qualify for semi-executive or executive positions in departmental and store management. For those who are interested in the merchandise side there are positions leading to buyership.

It is necessary to instruct in subjects which increase knowledge of the stock to be sold. The basis of this study is Textiles, which is so comprehensive that it is allowed to count as the Science requirement. It is open to third year pupils of all departments. Non-textiles, such as books, jewelry, dolls, and toys, are also studied.

During the fourth year emphasis is laid upon the essentials of the science of selling and the necessity for the development of individual power.

Advanced work in textiles and non-textiles will also be given.

The retail selling course is unique in that it is the only commercial course planned on a coöperative, part-time basis, that is, that store practice is a required part of the training.

These are the reasons why this vocational course, which is supplemented by practice under real conditions in a real store, is of so much value to you:

First, the store experience serves as a basis for your classroom work. Your teacher is especially trained to help you interpret your store experience. Through this self-development method, you will be able to stand on your own feet when you go to work.

Second, getting "store background" is absolutely necessary. This you will acquire both as a customer and as a worker.

Third, because of the required store practice, stores become interested in you and your study. You are counted upon as a resource for employment. You are free to use the store as a research field, also for materials, merchandise, printed system forms, and other things required for your use in the classroom.

Fourth, a well conducted store demands high standards of punctuality, accuracy and honesty. The practice work gives a particularly searching test in these and other qualities essential for success. Seventy per cent is a passing grade in school. The business man demands 100 per cent.

Fifth, the store contact supplements the work of your teacher. The standards of dress and conduct which have been discussed in the classroom you will find to be correct when you observe that the store insists upon the same standards.

Sixth, store practice makes insistent demands for poise and dignity of bearing, which you must have in order to compete with the older and more experienced workers.

Seventh, it is a liberal training for you to learn to adjust yourself to various groups of people, workers, executives and customers.

Eighth, daily experience in the store with the constant necessity for making a choice between right and wrong, good and bad selection, strengthens the will, develops judgment, and builds character.

Ninth, the coöperating stores are glad to pay for the work which you do. This is of benefit to pupils who find it difficult to finish their high school course without financial aid.

C.—BOSTON CLERICAL SCHOOL.

This school is for girls only and its purpose is to provide, in a public school, an opportunity for young women to secure, in a comparatively short time, a business training that will enable them to become efficient in office and secretarial work. It offers intensive vocational courses in business subjects, its methods of preparation being similar to those adopted by the best private schools. The school aims to provide specialized business training for the following groups of girls:

(a.) Graduates of high schools who have not taken commercial work and who desire to prepare for business.

(b.) Graduates of high schools who have taken partial business courses and who desire to secure such further training as will enable them to hold first-class positions.

(c.) Graduates of high schools who have taken commercial courses but who have not specialized sufficiently to enable them to secure satisfactory employment and who desire to make themselves more proficient.

(d.) Girls who have completed two or more years' work in high schools and are unable to finish but who wish to prepare for business.

ENTRANCE REQUIREMENTS.

Girls are received from all part of the city of Boston. All courses are open to high school graduates. The business course is open to those who have completed at least *two years* of high school work with full credit. The shorthand course is open to those who have had at least *three years* of high school work with full credit and to those who have completed the business courses in the Boston Clerical School. The secretarial course is open to *high school graduates* only. New students are admitted on any school day.

COURSES OF STUDY.

Business.—This course includes bookkeeping, intercommunication business practice, business English and correspondence, spelling, business arithmetic, rapid calculation, penmanship, commercial law, office practice and training in the use of bookkeeping machines and other office machinery. This course provides training for bookkeeping and general office positions.

Shorthand.—This course includes shorthand, typewriting, penmanship, rapid calculation, business English and correspondence, spelling, office training, filing, indexing, copying, billing machines, addressing machines, multigraph, dictaphone, duplicating machines, etc. Its object is to prepare for stenographic work and the operation of special office appliances.

Secretarial.—This course includes all the subjects of the business course with special emphasis on secretarial bookkeeping, the subjects of the shorthand course not already covered in the business course, and special lectures and work in secretarial routine. Its object is to prepare for

secretarial work and the more responsible office positions. All pupils who have not earned eight points in physical training are required to take the subject two periods a week.

LENGTH OF COURSES.

About one year's time is required for the average student to complete the work of either the business or shorthand course. The secretarial course requires about two years' time, and is recommended in all cases where the student is qualified and has the time to devote to it.

SPECIAL FEATURES.

Pupils may enter at any time and are graduated and placed in positions as soon as they have completed the course selected. Progress is individual and pupils are not hurried or retarded by others. Each course requires a definite amount of work but the time for completion depends entirely upon the ability and the application of the pupil. The school is equipped with the latest labor-saving devices, such as adding, computing, billing and addressing machines, copying and filing devices and dictaphone. For several weeks during the latter part of the shorthand course the students are trained in the various duties of a stenographer or secretary in a model office department under conditions similar to those in an actual business office. They also spend one or two weeks in the office of the head master where they are required to do much of the work of a secretary. In the business course, after receiving a thorough preliminary training in accounts, the pupils are advanced to the business practice department, where they perform transactions with one another, with the office department, and, through the mail, with pupils in schools in other cities. When the pupils have completed the work of this department they are transferred to the office practice department. This department has a set of offices and a bank equipped with modern books and office appliances. Each pupil performs the duties of the various positions in each office. This office training work is especially valuable in developing initiative and self-reliance on the part of the student. Pupils are sent out to business houses to work in temporary positions. This supervised employment gives valuable practical experience. An employment department is provided for the benefit of the graduates.

HOURS.

The school day is from 8.45 a. m. to 2.15 p. m., with luncheon period at noon. The school calendar is the same as that of the high schools. Pupils may remain after 2.15 p. m. a reasonable time for study or conference with the teachers.

The school is located in temporary quarters in the Roxbury High School building, Warren and Montrose streets, Roxbury.

D.—THE DAY INDUSTRIAL SCHOOLS.

BOSTON TRADE SCHOOL.

The purpose of this school is to prepare for efficient service in the wage-earning callings and for development through this to positions of leadership. The pupils are, with very few exceptions, graduates of elementary schools, and experience shows that as a rule it is the boy who has the ability and ambition to finish such a course that succeeds in an industrial school.

AGE OF ADMISSION.

No one is admitted under fourteen years of age. Younger boys, although graduates of elementary schools, cannot be admitted.

Applicants should be of a mechanical turn of mind and should have shown special proficiency in manual training work, drawing and arithmetic. No boy, however able in the performance of general school tasks, or however interested in mechanical exercises, will be admitted to the school unless he intends to learn and afterwards pursue a trade.

As the state pays one half the cost of maintenance of the school, it reserves the right to set up certain standards. The state has but one object in the maintenance of industrial schools, viz.: "To increase the industrial efficiency of the Commonwealth." To this end it insists that (a) the boy shall be strong and healthy, (b) that he shall have no physical or mental handicap, (c) that he shall not be a backward boy, (d) that he shall give evidence of ability to profit by the work of the school. A boy who gives evidence of failure to make a successful mechanic in his chosen trade may be transferred to another department or retired from the school on the judgment of those in charge.

A FINISHING SCHOOL.

This school aims primarily to send boys into the trades with a degree of skill as apprentices. The boy who aims to become a "mechanical engineer" should take a four-year course in a high school and fit for college or some technical institution of equal grade. There is, however, a large demand for men who know the trade and who, in addition, possess an adequate knowledge of applied mathematics and science and a skill in drawing that enable them to read and make plans, and to direct others in their work. Such men, beginning as skilled workmen, are much sought after as foremen, inspectors and superintendents, and the opportunities for success and promotion are increasing in the ever-widening industrial field of this country. While this school does not fit for college or for technical institutes of college grade, it does not follow that a student's educational career is limited to the courses of this school, as after graduation he may continue his studies in such schools as Wentworth Institute, Lowell Institute, Young Men's Christian Association, Franklin Union, Massachusetts Normal Art School, etc.

LENGTH OF COURSE.

In this school emphasis is placed on a two-year course with the idea of rounding out the student's training in the things he needs most in his chosen trade. With the present trades offered, no boy should apply who does not feel reasonably sure that he can devote at least *two* years to the course.

HOURS.

The school day is from 8.30 a. m. to 4 p. m., with luncheon period at noon. In other respects the school calendar is the same as that of the other public schools. One half of each day is given to shop work and the other half to academic work, the latter as closely related to the trade as possible.

TRADES TAUGHT.

The school offers courses in cabinetmaking, electricity, machine practice, printing and sheet metal work. With increased facilities it is planned to add other departments such as masonry, painting, plumbing, steam fitting, and gas and steam engine work. It is the policy of the school to have as large a variety of departments as possible, but to keep each department small in order that the supply may not exceed the demand. All shop instruction is given by men experienced in the trade. The work of each shop is on useful, commercial products, and in the manufacturing processes the usual shop methods are pursued.

ACADEMIC WORK.

The academic instruction is given by college trained men who have had both industrial experience and successful teaching experience. The work both in content and extent is determined by the needs of the trade, emphasizing those things that may be made immediately available when the boy enters his apprenticeship. The academic studies are mathematics (arithmetic, algebra, geometry), drawing, science, English, history, geography, hygiene and civics. One half the time of each day is devoted to shop work and the other half to related academic work.

Mathematics includes the applied principles of arithmetic, algebra, geometry and trigonometry.

Science is taught in a practical, experimental way and English includes composition, business correspondence, trade literature and general literature.

Industrial history and commercial geography are designed to show the development of the skilled trades and to acquaint the student with fields of industrial opportunity.

Hygiene is made very practical by emphasizing laws that need be observed to insure safety and health in the student's chosen vocation.

Civics is taught inductively for the purpose of familiarizing the student with the machinery of government and of teaching the duties of citizens.

Physical training includes both gymnasium work for all around physical development and military training.

Course of Study.

SUBJECTS.	PERIODS PER WEEK.			
	First Year.	Second Year.	Third Year.	Fourth Yea .
Shop work.....	20	20	20	20
English.....	3	3	3	3
Mathematics.....	3	3	5	5
Science.....	3	3	5	5
Industrial history.....	1	1	.....	.....
Commercial geography.....	1	1	.....	.....
Drafting.....	6	6	6	6
Civics.....	1	1	.....	.....
Hygiene.....	1	1	.....	.....
Military drill.....	1	1	1	1

NOTE.— One half the time is devoted to shop work.

VOCATIONAL ADVISER.

The school has a vocational adviser whose business it is to keep in touch with manufacturing concerns and the labor market to ascertain ways and means by which the school may meet the industrial demands, and to secure work for graduates.

NEW BUILDINGS.

A large new building, especially adapted to the needs of the school, has been erected on Parker street, not far from the Museum of Fine Arts. It now accommodates about 500 pupils. It will ultimately provide for 1,000 pupils.

EVENING CLASSES FOR MEN IN THE TRADES.

Mondays, Tuesdays, Thursdays, 7.30 to 9.30, during the regular evening school term.

The school is open and free to residents of Boston (and to residents of the Commonwealth upon approval by the State Board of Education) who are over seventeen years of age, but who are not attending a public day school. They must be able to profit by the instruction offered in the work they select.

An advance payment of one dollar is required when application for admission is made. This amount is refunded upon completion of the work elected, if attendance is satisfactory.

The instruction is given by teachers of practical experience in the trades. The school aims to serve those who need instruction in some particular branch of their vocation and to furnish that instruction in the most direct way possible.

It is the purpose of the school to give each student the special help he may need to meet the requirements of his daily work.

He may, therefore, enroll for a longer or shorter time according to his needs.

Evening branches are maintained in the Mechanic Arts High School Building, in the Old Dearborn School Building, Roxbury, in the East Boston High School Building, and in the North Bennet Street Industrial School. These branches may be extended and new ones established to meet the demand of men seeking to increase their trade efficiency.

Nonresidents of Boston who are seventeen years of age, and who are able to profit by the instruction offered, may be admitted if approved by the State Board of Education. One half of their tuition is then paid by the state and one half by the city or town in which they reside. No non-resident, however, will be admitted to a course in this school if the city or town in which he resides offers a like course. Further information may be obtained upon application to the Principal.

TRADE SCHOOL FOR GIRLS.

The original purpose in the founding of this school was to provide training in some skilled occupation for girls over the required school age whose interests and capabilities inclined them to enter productive industry, or whose circumstances permitted but a brief preparation for self-support.

While this purpose still holds, changing business conditions and new national and state legislation affecting vocational education have greatly extended the opportunities offered by the various departments of the school. New conditions in the home and in the shops calling for new methods of training workers require a constant readjustment in the courses of instruction.

Under the laws of Massachusetts and the rules of the School Committee the following organization holds good for one year after the close of the war.

ADMISSION REQUIREMENTS.

The school is free to residents of Massachusetts over fourteen years of age who give evidence of ability to profit by the work of the school. There is no upper age limit. Applicants may select any course provided by the curriculum, but failure to reach a satisfactory standard of accomplishment necessitates a change of course or withdrawal from the school.

SESSIONS.

The day school is in session from 8.30 a. m. to 4 p. m. with luncheon and recreation period at noon, for five days in the week, twelve months in the year. Girls may enter on any school day but the spring and summer terms are most favorable for trying out and rapid advancement.

Those who enter for the summer term, the first school day after the Fourth of July, gain a season in going out to work while those already in the school who remain through the summer obtain the best positions for the fall season.

LENGTH OF COURSE.

The time spent by any student in the Trade School varies with the age, capacity and application of the individual, and with the trade chosen. Students may remain two years in the day classes and indefinitely in the extension classes as there is always something new to learn. Those who are limited for time choose some type of work requiring but little training

and are ready for a position in a few weeks or months. All instruction is individual so that the student advances as rapidly as her own ability and ambition permit.

DEPARTMENTS.

The many different kinds of hand and machine work taught in the Trade School are grouped under seven department heads:

Dressmaking,

Millinery,

Children's wear,

Machine operating,

Catering,

Cotton and linen wear,

Trade design,

but these departments cover many important related arts and crafts, such as

Machine repairing,

Embroidery and smocking,

Costume designing,

Home nursing,

Cutting and fitting,

Drafting.

ACADEMIC INSTRUCTION.

One fourth of the school time is given to instruction in related work especially planned to train in spoken and written English and good citizenship. When any student is found deficient in her elementary education she is given special instruction until this deficiency is made good.

PLACEMENT OPPORTUNITIES.

The school is the fortunate possessor of a long list of employers who are glad to welcome a Trade School girl at any time, at any wage that may be set. The vocational assistants make every effort to fit the girl into the right place:—one convenient to her home and offering congenial work in pleasant surroundings. Careful follow-up work insures the pay promised, the legal working hours and a new position when it is needed. The most satisfactory result of this follow-up work is the steady advancement of Trade School girls to positions of responsibility as teachers, forewomen, designers and heads of departments.

EXTENSION CLASSES.

Women over sixteen years of age who are employed during the day are provided for in classes held after the day school hours at such times and on such evenings as are most convenient for the groups.

Instruction is given in any type of work for which the school is equipped for a group of not less than ten students. These extension classes are especially profitable for workers wishing to learn the operation of special machines, new methods of hand work, or an alternative occupation.

Girls who are obliged to leave the day classes before completing the requirements for a certificate or a diploma may complete their work in these classes.

The Trade School is located at 620 Massachusetts avenue, near Washington street, one block north of the Northampton Street Station of the elevated.

Visitors are always welcome.

E.—CONTINUATION SCHOOL.

FOR THOSE WHO LEAVE SCHOOL PERMANENTLY TO GO TO WORK.

Every pupil under sixteen years of age who leaves school to go to work permanently is required to attend the Continuation School one-half day each week until the pupil's sixteenth birthday. The first step is to procure a working certificate at the Certifying Office, 218 Tremont street. At this time the pupil must present:

1. A birth record.
2. A promise of employment.
3. A school record obtained from the school last attended.

Exact information concerning these will be provided by the teacher, the principal or the counselor of the school.

Assignments to the Continuation School are made at the time employment certificates are granted.

The purpose of this school is to conserve the pupil's present academic knowledge and add to it; to help the young worker to better knowledge and efficiency in employment; to give opportunity for pupils to discover, through prevocational work, their own vocational aptitudes; to guide young workers through the mistakes which they are likely to make in the difficult transition from school to employment; and to assist those pupils who are temporarily out of work to obtain new employment.

Each pupil attends classes either from 8 to 12 a. m. or from 1 to 5 p. m. one day each week. The terms and vacations of the Continuation School are the same as those of the elementary schools.

The boys' school is in the Brimmer Building on Common street. The girls' school is at 25 La Grange street. Some classes are held in stores and factories. The Household Arts Department is at 52 Tileston street.

The school offers courses for boys and girls in elementary store practice, bookkeeping, typewriting, office practice, advanced English. For girls only, there are classes in dressmaking, millinery, power machine operating, cooking and household arts. For boys only, there are classes in printing, electrical work, machine shop practice, woodworking and sheet metal work. In general, the time of the pupils is divided equally between academic work and either shop work or commercial work. Pupils who leave the elementary schools in the lower grades may devote all their time to academic work. Instruction in the fundamentals of English, arithmetic, civics and hygiene is given to all pupils.

The instructors of boy's classes are men. Those of girl's classes are women. Academic instruction is given by college or normal school graduates. All shop instruction is given by men and women experienced in the trade. The work of each shop is on useful and commercial products. So far as possible, all class instruction is based upon the pupil's experience in employment or in the shops.

Additional information may be obtained upon application to the principal of the school, Brimmer Building, Common street.

SCHOOL DOCUMENT NO. 7—1919
BOSTON PUBLIC SCHOOLS
REAPPOINTMENTS OF TEACHERS AND
MEMBERS OF SUPERVISING STAFF



BOSTON
PRINTING DEPARTMENT
1919

REAPPOINTMENTS OF TEACHERS AND MEMBERS OF SUPERVISING STAFF.

IN SCHOOL COMMITTEE, June 16, 1919.

To the School Committee:

In accordance with section 264 of the Regulations, I herewith submit a list of reappointments for the school year 1919-20, together with a statement of the number of teachers to which each school and school district is entitled, and the number of pupils upon which the quota of teachers is based. All reappointments are made subject to the provisions of the Regulations governing promotional examinations.

All reappointments of high school teachers are based upon the orders of the School Committee as passed at the meeting of May 20, 1918, which are as follows:

Ordered, That the Latin and day high schools be so organized in September, 1918, and each school year thereafter, that they shall approximate the following standards of organization:

(a) 768 pupil hours of instruction for men and 704 pupil hours for women in academic work (*i. e.*, "A" work), based on 24 or 22 periods of teaching per week, respectively, with 32 pupils in each class.

(b) 600 pupil hours of instruction per teacher in sewing, cookery, millinery, shop work, coöperative or industrial work (*i. e.*, "C" work), based on 30 periods of teaching, with 20 pupils in each class.

The computation is based upon a report received from each head master, as of October 25, 1918. Some of the high schools appear to have several vacancies. Attendance has not increased and the establishment of the junior high schools has resulted in a situation in which it would seem preferable to carry vacancies for a time in

order to avoid the possibility from year to year of having more high school teachers than are needed in the service.

These vacancies have been filled during the current school year by the appointment of junior assistants, or by the assignment of elementary teachers. The assignments of elementary school teachers to high schools will be continued until June, 1921. After that date, by action of the School Committee, no further assignments of elementary school teachers will be made. These assigned teachers appear under the heading of "Reservoir of Assigned Teachers," page 18.

In view of the anticipated reorganization of the course of study in the Mechanic Arts High School, it is recommended that no change be made in the number of teachers which they now have until after the opening of school in September, 1919.

All reappointments of elementary school teachers are made on the basis of one teacher for every forty pupils belonging in all grades. The appointment of new teachers during the current school year has been made on the basis of forty pupils in the first, seventh, eighth and ninth grades, and forty-two pupils in the grades from the second to the sixth. In consequence of this difference in the basis of appointment of new teachers and the reappointments of teachers for the ensuing school year, the reports which follow indicate a considerable number of elementary school vacancies, but these are technical rather than actual vacancies,—that is, they are vacancies on the basis of forty pupils per teacher. Except as hereinafter explained, there are no teachers in excess of the Regulations.

EXCESS TEACHERS.

In the High School of Practical Arts there are four teachers in excess of the number allowed under the Regulations. I recommend that these teachers be allowed to remain in the school until the fall, at which time the membership may warrant their retention; if not, their transfer may be effected.

In the Hancock District there is one assistant, kindergarten, in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Norcross District there is one assistant, kindergarten, in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Quincy District there is one assistant, kindergarten, in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Sherwin District there is one instructor, special class, in excess of the number allowed by the Regulations. This teacher has been assigned to follow-up work. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

In the Thomas N. Hart District there is one assistant, kindergarten, in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

Submasters.

In the following districts submasters are employed in excess of the Regulations:

Bigelow.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

Elihu Greenwood.—One. This submaster has been

allowed in previous years for assignment to the Fairmount School, in which there are several upper grades. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

Frederic W. Lincoln.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

Quincy.—One. This is due to the return of a submaster from military service. I recommend that this teacher be allowed to remain until such time as his transfer may be effected.

Sherwin.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

Thomas N. Hart.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1920.

In each of the following districts there is one additional submaster in charge of the pupils above the third grade as authorized by the School Committee:

Charles Sumner.

Dearborn.

Eliot.

Henry L. Pierce.

Oliver Wendell Holmes.

Phillips Brooks.

Quincy.

Sherwin.

Thomas Gardner.

Thomas N. Hart.

Washington.

Wendell Phillips.

I recommend that they be continued during the school year ending August 31, 1920.

First Assistants in Charge.

In each of the following districts there is one first assistant in charge in excess or in addition to the number authorized by the Regulations:

Abraham Lincoln.

Eliot.

Gilbert Stuart.

Harvard-Frothingham.

Prescott.

Sherwin.

Washington.

Wells.

I recommend that teachers of said rank be continued in the foregoing districts during the school year ending August 31, 1920.

First Assistant, Primary School.

In the following district the position of first assistant, primary school, has been continued from year to year by order of the Board:

Hugh O'Brien District, Samuel W. Mason School.—
One.

I recommend that the rank be continued during the school year ending August 31, 1920.

First Assistants, Grammar School.

In each of the following districts the position of first assistant, grammar school, is to be abolished on the retirement of the present incumbents:

Bowdoin.— One.

Charles Sumner.— One.

Dearborn.— One.

Harvard-Frothingham.— Two.

Henry L. Pierce.— One.

Jefferson.— One.

John Winthrop.— One.

Longfellow.— One.
Norcross.— One.
Oliver Hazard Perry.— One.
Rice.— One.
Robert G. Shaw.— One.
Samuel Adams.— One.
Ulysses S. Grant.— One.

TEACHERS TAKEN FROM TENURE.

There are three teachers in the service who were once appointed to serve during the pleasure of the School Committee but who have since been taken from tenure or will be taken from tenure at the close of the current school year. These teachers have been reappointed for the year ending August 31, 1920, as follows:

Bunker Hill District.— One.
Charles Sumner District.— One.
Eliot District.— One.

Conservation of Eyesight Classes.

I hereby re-establish conservation of eyesight classes in the following districts for the year 1919-20:

Dillaway.— One.
Franklin.— One.
Harvard-Frothingham.— One.
Norcross.— One.
Wells.— One.

Special Classes.

Subject to your approval, I hereby re-establish special classes in the following districts for the year 1919-20:

Abraham Lincoln.— Two.
Agassiz.— One.
Bennett.— One.
Bigelow.— Two.

Blackinton-John Cheverus.— One.
Bowdoin.— Two.
Bunker Hill.— Two.
Chapman.— One.
Dearborn.— One.
Dillaway.— One.
Dudley.— One.
Dwight.— Six.
Edward Everett.— One.
Eliot.— Three.
Everett.— One.
Franklin.— One.
George Putnam.— Two.
Hancock.— Three.
Harvard-Frothingham.— One.
Henry L. Pierce.— One.
Hugh O'Brien.— One.
Hyde.— One.
Jefferson.— One.
John Winthrop.— One.
Lawrence.— One.
Lewis.— One.
Longfellow.— One.
Lowell.— Two.
Mather.— One.
Oliver Hazard Perry.— One.
Oliver Wendell Holmes.— Two.
Phillips Brooks.— One.
Prescott.— One.
Quincy.— Two.
Roger Wolcott.— One.
Samuel Adams.— One.
Sherwin.— Seven.
Theodore Lyman.— One.
Thomas N. Hart.— One.
Ulysses S. Grant.— One.
Washington.— Two.
Wells.— Three.

Wendell Phillips.— Six.

William E. Russell.— One.

Speech Improvement Classes.

Subject to your approval, I hereby re-establish speech improvement classes in the following districts for the year 1919-20:

Chapman.— One.

Hancock.— One.

Franklin.— One.

John A. Andrew.— One.

Hyde.— One.

Lewis.— One.

Mary Hemenway.— One.

Washington.— One.

Open-air, Ungraded and Special English Classes.

I recommend that the same policy be pursued regarding the establishment of open-air, ungraded and special English classes as in 1918-19, and that no action concerning the re-establishment of these classes for the year 1919-20 be taken at the present time. Action should be postponed until after the opening of the schools in September, when orders will be presented to the School Committee regarding the establishment of all such classes on the basis of the registration at that time. I recommend that all open-air, ungraded and special English classes at present authorized be discontinued at the close of the current school year and that such classes be re-established only by special order of the School Committee.

Rapid Advancement Classes.

I recommend that no action concerning the re-establishment of rapid advancement classes for the year 1919-20 be taken at the present time. Action should be postponed until after the opening of the schools in September, when orders will be presented to the School

Committee regarding the establishment of all such classes on the basis of the registration for the ensuing school year. I recommend that all rapid advancement classes at present authorized be discontinued at the close of the current school year and that such classes be re-established in the future only by special orders of the School Committee.

PART I.

REAPPOINTMENTS OF PRINCIPALS AND MEMBERS
OF THE SUPERVISING STAFF.

APPOINTED: *To serve during the pleasure of the School Committee.*

Director of Music, John A. O'Shea.

Director of Vocational Guidance, Susan J. Ginn.

First Assistant Director of Practice and Training, Mary E. Keyes.

Assistant Director of Educational Investigation and Measurement,
Arthur W. Kallom.

Assistant Director of Manual Arts, George M. Morris.

Assistant Directors of Practice and Training, E. Gertrude Dudley,
Sarah A. Lyons.

Assistants in Music, Cecelia M. Bainton, Emma C. Diehm, Ruth B.
Mitchell.

Vocational Assistant, Eleanor J. O'Brien.

School Nurses, Frances A. Burnham, Agnes G. Kelleher, Sara Mac-
Gillivray, Catherine F. O'Toole.

APPOINTED: *To serve for the term ending August 31, 1920.*

Blackinton-John Cheverus District.— Master, John Carroll.

Gaston District.— Master, Josephine A. Powers.

Lawrence District.— Master, Thomas J. Sheahan.

Norcross District.— Master, Mary R. Thomas.

Prescott District.— Master, Archer M. Nickerson.

Director of Medical Inspection, William H. Devine.

Director of Penmanship, Bertha A. Connor.

Director of Physical Training, Nathaniel J. Young.

Director of Salesmanship, Isabel C. Bacon.

Director of Special Classes, Ada M. Fitts.

First Assistant Director of Manual Arts, Edward C. Emerson.

Assistant Director of Manual Arts, Daniel W. O'Brien.

First Assistant in Manual Arts, Helen E. Cleaves.

Assistant in Manual Arts, Laura W. Cook.

Vocational Assistant, Irving O. Scott.

School Nurses, Florence I. Bolles, Idabel Durgan, Ellen L. Fenton,
Katharine FitzGerald, Theresa V. Kelley, Catherine C. Marks,
Anna B. McCue, Evelyn F. McLaughlin, Catherine C. Mealey,
Mary I. Oakes, Mary B. O'Donnell, Roberta E. Pollard, Dorothy
E. Ripley, Marion C. Sullivan.

PART II.

REAPPOINTMENTS OF SUBORDINATE TEACHERS.

NOTE.—Physical training teachers in Normal, High and Latin Schools are given under Part III.

NORMAL SCHOOL.

Largest number of pupils belonging at any time between September 1, 1918, and April 1, 1919	242
TEACHERS.—Entitled to 15 regular teachers	15
<i>Now serving on tenure</i>	9
Appointed: <i>To serve during the pleasure of the School Committee.</i> —First Assistants, Heads of Departments, Mary C. Shute, Marie A. Solano, Gertrude Weeks; Assistants, M. Margaret Gaffey, Edith L. Smith	5
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Master, Head of Department, J. Mace Andress	1
	— 15

PUBLIC LATIN SCHOOL.

TEACHERS.—Entitled to 30 regular teachers	30
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Junior Master, William H. J. Kennedy	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Master, Head of Department, William R. Morse; Junior Masters, Elmer R. Bowker, Ralph M. Corson, Wilfred F. Kelley, Max Levine, James D. Ryan	6
	— 28
In addition to the above-named staff of permanent teachers there were during the school year 1918–19 two junior assistants	2
	— 30

GIRLS' LATIN SCHOOL.

TEACHERS.—Entitled to 24 regular teachers	24
<i>Now serving on tenure</i>	19
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Master, Head of Department, John E. Denham; Junior Master, Harrison G. Meserve; Assistant, Mary E. Greene	3
	— 22
In addition to the above-named staff of permanent teachers there were during the school year 1918–19 two assistants assigned from elementary schools	2
	— 24

BRIGHTON HIGH SCHOOL.

TEACHERS.— Entitled to 21 regular teachers	21
<i>Now serving on tenure</i>	10
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Ethel T. Burpee, Sylvia E. Donegan, Elizabeth I. O'Neill; Coöperative Instructor, Clarence W. Goodridge; Assistant Instructor in Commercial Branches, Mary G. McEvoy; Assistant Instructor in Manual Arts, Marjorie Loring	6
	16
In addition to the above-named staff of permanent teachers there were during the school year 1918-19: One assistant assigned from an elementary school and four temporary teachers. One of these temporary teachers also served as teacher coach	5
	21

CHARLESTOWN HIGH SCHOOL.

TEACHERS.— Entitled to 16 regular teachers	16
<i>Now serving on tenure</i>	8
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Master, Head of Department, Arthur S. Wells; Assistants, Maude E. Butters, Margaret J. Griffith, Elizabeth J. Martin	4
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Coördinator, Maurice J. Moriarty	1
	13
In addition to the above-named staff of permanent teachers there were during the school year 1918-19: One assistant assigned from an elementary school, one shop foreman, assigned from the Department of Manual Arts, and one temporary teacher	3
	16

DORCHESTER HIGH SCHOOL.

TEACHERS.— Entitled to 67 regular teachers	67
<i>Now serving on tenure</i>	39
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Junior Masters, Harry F. Doe, Ernest M. Hunt; Assistants, Laura S. Clark, Katharine F. Garrity, Adelaide Haley	5
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Junior Masters, Richard P. Bonney, John J. Connelly, Jr., Jared W. Davis; Assistants, Amy B. Baker, Mary L. Carty, Helen F. Keefe, Margaret C. Kennedy, Fannie Myerson, Elizabeth K. Nagle, Marion A. Sayward, Mary L. Sheehy, Helen A. Taff, Mary A. Ward, Edna Willis; Coöperative Instructor, Francis L. Bain; Assistant Instructors in Com- mercial Branches, Anna J. Dolan, Elinore Furber, Florence L. Hamblin; Industrial Instructors, Alice M. Croke, Theresa A. Fitzpatrick	20
	64

In addition to the above-named staff of permanent teachers there were during the school year 1918-19: One junior assistant and three temporary teachers 4

68

There were, however, eight teachers on leave of absence, so that the school was operated with 60 teachers.

EAST BOSTON HIGH SCHOOL.

TEACHERS.—Entitled to 23 regular teachers 23

Now serving on tenure 17

Appointed: *To serve during the pleasure of the School Committee.*—Assistant, Louise Adams 1

Appointed: *To serve for the term ending August 31, 1920.*—Junior Master, Walter H. Naylor; Assistants, Grace W. Heartz, Ruth E. Thomas; Instructor in Commercial Branches, Lewis A. Newton 4

22

ENGLISH HIGH SCHOOL.

TEACHERS.—Entitled to 57 regular teachers 57

Now serving on tenure 47

Appointed: *To serve during the pleasure of the School Committee.*—Master, Head of Department, Bertram C. Richardson; Junior Masters, J. Albert Brack, Carey P. Ladd, Daniel V. O'Flaherty, John F. Roche 5

Appointed: *To serve for the term ending August 31, 1920.*—Master, Head of Department, Charles W. French; Junior Masters, Earl M. Benson, Walter I. Chapman, Merrill C. Hill, Walter L. Leighton, Louis A. McCoy, Edward J. Wall, Edward N. Wilson 8

60

In addition to the above-named staff of permanent teachers, there were during the school year 1918-19: Three junior assistants 3

63

There are, however, two masters, heads of departments, who are in charge of annexes, doing no teaching and who are charged with pupil hours. There were also five teachers on leave of absence so that the school was operated with 56 teachers.

GIRLS' HIGH SCHOOL.

TEACHERS.—Entitled to 55 regular teachers 55

Now serving on tenure 46

Appointed: *To serve during the pleasure of the School Committee.*—First Assistant, Head of Department, May M. Smith; Junior Master, Herbert B. Cole; Assistants, Margaret C. Brawley, Elizabeth Chase 4

Appointed: *To serve for the term ending August 31, 1920.*—Assistants, Marion A. Guilford, Margaret Little, Ethel R. Moulton, Mildred E. Smith 4

54

In addition to the above-named staff of permanent teachers, there were during the school year 1918-19: One assistant, assigned from an elementary school, and one temporary teacher

2
—
56

There were, however, two teachers on leave of absence, so that the school was operated with 55 teachers.

HIGH SCHOOL OF COMMERCE.

TEACHERS.—Entitled to 45 regular teachers 45

Now serving on tenure 27

Appointed: *To serve during the pleasure of the School Committee.*—Master, Head of Department, Maurice J. Lacey; Junior Masters, Winburn S. Cannell, Harold B. Garland, James E. O'Neil, Edward A. Post, Max Weiss 6

Appointed: *To serve for the term ending August 31, 1920.*—Junior Masters, John B. Casey, Ernest J. Hall, Thomas E. Mahoney, William F. Remmert, F. Edwin Walter; Instructors in Commercial Branches, Robert Bitzer, George A. Fellows, Louis J. Fish, Walter E. Leidner, Edward J. McCarthy 10
— 43

In addition to the above-named staff of permanent teachers, there were during the school year 1918-19: One junior assistant, one assistant assigned from a high school, and one assistant assigned from an elementary school

3
—
46

There were, however, three teachers on leave of absence, so that the school was operated with 43 teachers.

HIGH SCHOOL OF PRACTICAL ARTS.

TEACHERS.—Entitled to 21 regular teachers 21

Now serving on tenure 20

Appointed: *To serve during the pleasure of the School Committee.*—Assistants, Amy L. Burbank, Jessie Moore, Laura F. Wentworth; Industrial Instructor, Mabelle B. Rimbach 4

Appointed: *To serve for the term ending August 31, 1920.*—Assistant, Jennie F. Bailey 1
— 25

There was, however, one teacher assigned to the High School of Commerce for the school year.

HYDE PARK HIGH SCHOOL.

TEACHERS.—Entitled to 24 regular teachers 24

Now serving on tenure 10

Appointed: *To serve during the pleasure of the School Committee.*—Junior Master, Harold F. Stevens 1

Appointed: *To serve for the term ending August 31, 1920.*—Master, Head of Department, Emerson Rice; First Assistant, Head of Department, Laura B. Doran; Junior Master, William M. Edmonstone; Assistants, Ruby H. Cole, Mary G.

Hickey; Coördinator, James C. Clarke; Instructor in Co-operative Branches, Martin L. Olson; Coöperative Instructor, John A. Fisher; Industrial Instructors, Sarah L. Cauley, Marguerite S. King

10

21

In addition to the above-named staff of permanent teachers, there were during the school year 1918-19: Two junior assistants and one instructor, shopwork, assigned from the Department of Manual Arts

3

24

MECHANIC ARTS HIGH SCHOOL.

Now serving on tenure

39

Appointed: *To serve during the pleasure of the School Committee.*—Instructors, Mechanical Departments, William McRobbie, Ernest E. Town

2

Appointed: *To serve for the term ending August 31, 1920.*—Junior Masters, James P. Farnsworth, Francis J. Horgan; Instructors, Mechanical Department, Joseph R. B. Dunn, James H. Philbrick

4

45

ROXBURY HIGH SCHOOL.

TEACHERS.—Entitled to 35 regular teachers

35

Now serving on tenure

24

Appointed: *To serve during the pleasure of the School Committee.*—First Assistant, Head of Department, Mabel L. Warner

1

Appointed: *To serve for the term ending August 31, 1920.*—Assistants, Marion L. Barker, Ellen M. Greany; Instructor in Commercial Branches, Harold J. Smith; Assistant Instructors in Commercial Branches, Mary K. Austin, Alice H. M. Power, Gertrude L. Ward

6

31

In addition to the above-named staff of regular teachers, there were during the school year 1918-19: Three junior assistants and one assistant assigned from an elementary school

4

35

SOUTH BOSTON HIGH SCHOOL.

TEACHERS.—Entitled to 25 regular teachers

25

Now serving on tenure

18

Appointed: *To serve during the pleasure of the School Committee.*—Master, Head of Department, John E. J. Kelley; First Assistant, Head of Department, Elisabeth G. Tracy

2

Appointed: *To serve for the term ending August 31, 1920.*—Junior Master, William F. Linehan; Assistants, Mary C. Grandfield, Lucy M. Greely, Alice G. Porter; Assistant Instructor in Salesmanship, Alice M. Falvey; Assistant Instructors in Commercial Branches, Irene H. Corkery, Anna T. Kelley, Elizabeth A. Nash

8

28

In addition to the above-named staff of permanent teachers, there was during the school year 1918-19: One junior assistant

1
—
29

There were, however, four teachers on leave of absence, so that the school was operated with 25 teachers.

WEST ROXBURY HIGH SCHOOL.

TEACHERS.— Entitled to 28 regular teachers	28
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master, Head of Department, Harold C. Spencer	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Junior Masters, Thomas P. Dooley, Andrew R. McCormick; Assistants, Angela M. Keenan, Hazel M. Purmort; Instructor in Commercial Branches, Thaddeus J. Keefe; Assistant Instructor in Salesmanship, Mary G. Jennings	6
	— 28

BOSTON CLERICAL SCHOOL.

TEACHERS.— Entitled to 8 regular teachers	8
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Head Instructor in Bookkeeping, George L. Hoffacker; Head Instructor in Stenography, Atlee L. Percy; Clerical Instructor, Charles A. Cederberg; Clerical Assistants, Annie T. Elwell, Helen J. Gilmore, Mary L. Knodell, Winifred H. Rogers, Katherine W. Ross	8

RESERVOIR TEACHERS.

	Assigned From	Assigned To
* Ellen A. Barry	Samuel Adams District.	Roxbury High School.
Harriet M. Barthelmess	Hancock District.	Department of Educational Investigation and Measurement.
Alice A. Brophy	John Winthrop District.	Girls' Latin School.
Frances Burnce	Hancock District.	Girls' Latin School.
* Marion Daniels	Wells District.	Dorchester High School.
Elizabeth E. Haggerty	Henry L. Pierce District.	Girls' High School.
Eleanor M. Kyle	Phillips Brooks District.	Charlestown High School.
Mary J. Mohan	Hugh O'Brien District.	Roxbury High School.
* Alice E. Murphy	Henry L. Pierce District.	Hyde Park High School.
Margaret M. Sallaway	Edward Everett District.	Brighton High School.
Ellen G. Wiseman	Prince District.	High School of Commerce.

* Serving as junior assistants.

ABRAHAM LINCOLN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—60 in ungraded classes; 19 in special class; 36 in open air class; 1319 in Grades I to VI; 403 in Grades VII and VIII; 77 in Grade IX		1,914
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,897
TEACHERS.—Entitled to 45 grade teachers, 2 teachers of ungraded classes, 1 teacher of a special class and 1 teacher of an open air class		49
<i>Now serving on tenure</i>		39
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, Joseph E. Lynch; Assistant, Annie V. Devine		2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Instructor, Special Class, Kathleen McHugh; Assistants, Margaret M. Casey, Anastasia Ford		3
		44
KINDERGARTENS.—Teachers.—Number entitled to		3
<i>Now serving on tenure</i>		3

AGASSIZ DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—16 in special class; 61 in prevocational classes; 484 in Grades I to VI; 164 in Grades VII and VIII		725
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		682
TEACHERS.—Entitled to 16 grade teachers, 1 teacher of a special class and 2 teachers of prevocational classes		19
<i>Now serving on tenure</i>		16
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Elizabeth F. Laughlin		1
		17
KINDERGARTENS.—Teachers.—Number entitled to		2
<i>Now serving on tenure</i>		1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Christine Chapin		1
		2

BENNETT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—17 in special class; 1,225 in Grades I to VI; 281 in Grades VII and VIII		1,523
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,492
TEACHERS.—Entitled to 37 grade teachers, 1 teacher of a special class		38

<i>Now serving on tenure</i>	26	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Katharine M. Finn, Edith Stahl	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Mabel M. Leach; Assistants, Alice G. Flynn, Margaret E. O'Brien, Edith D. Rodgers, Helen E. Rourke, Ruth V. Tobin	6	34
KINDERGARTENS.— Teachers.— Number entitled to		6
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Katherine D. Warren; Assistants, Elizabeth M. Daley, Marion E. Jose	3	6

BIGELOW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 27 in special classes; 53 in rapid advancement classes; 613 in Grades I to VI; 173 in Grades VII and VIII	866
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	851
TEACHERS.— Entitled to 19 grade teachers; 2 teachers of special classes; 2 teachers of rapid advancement classes	23
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, Francis M. Morrissey; Assistant, Lillian M. Connors	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Nellie A. Condon	1
KINDERGARTENS.— Teachers.— Number entitled to	24
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Irene B. Murray	1
	2

BLACKINTON-JOHN CHEVERUS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 17 in special class; 1,162 in Grades I to VI; 260 in Grades VII and VIII	1,439
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,350
TEACHERS.— Entitled to 35 grade teachers, 1 teacher of a special class	36
<i>Now serving on tenure</i>	24
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Ellen A. Leahy	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster in Charge, Harry Brooks; Instructor, Special	

Class, Eleanor A. Rowan; Assistants, Marie J. Alexander, Mildred A. Dacey, Marie C. Doherty, Eleanor A. Dordoni, Agnes J. Martin, Zetta Morrison	8	33
KINDERGARTENS.— Teachers.— Number entitled to	—	6
<i>Now serving on tenure</i>	4	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Assistant, Mary E. Brazil	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, M. Loretta Kennedy	1	6

BOWDITCH DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 37 in open-air class; 822 in Grades I to VI; 191 in Grades VII and VIII	1,050
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,034
TEACHERS.— Entitled to 25 grade teachers, 1 teacher of an open-air class	26
<i>Now serving on tenure</i>	19
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Assistants, Alice E. Bentley, Helen L. Mahoney	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Josephine M. Friery, Mary C. Hawkes, Gladys M. Parker, Gertrude C. Roemer	4
	25
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	4

BOWDOIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 30 in special classes; 35 in open-air class; 757 in Grades I to VI; 164 in Grades VII and VIII	986
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	966
TEACHERS.— Entitled to 23 grade teachers, 2 teachers of special classes, and 1 teacher of an open-air class	26
<i>Now serving on tenure</i>	19
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Instructor, Special Class, Cora E. Wood; Assistant, Agnes F. Kelly	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Emma A. Timberlake; Assistants, Dora L. Lombard, Rose E. Segal	3
	24
KINDERGARTENS.— Teachers.— Number entitled to	7
<i>Now serving on tenure</i>	4
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Emma L. Campbell, Imelda S. Hagan	2
	6

BUNKER HILL DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—36 in special classes; 480 in Grades I to VI; 121 in Grades VII and VIII		637
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		608
TEACHERS.—Entitled to 15 grade teachers, 2 teachers of special classes		17
<i>Now serving on tenure</i>		13
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructors, Special Classes, Katharine A. McCarron, Margaret McCrillis; Assistants, Anna P. Hannon, Agnes L. Harrington		4
	—	17
KINDERGARTENS.—Teachers.—Number entitled to		2
<i>Now serving on tenure</i>		1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Amy A. Snelling		1
	—	2

CHAPMAN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—898 in Grades I to VI; 222 in Grades VII and VIII		1,120
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,090
TEACHERS.—Entitled to 28 grade teachers		28
<i>Now serving on tenure</i>		24
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Regina G. O'Connor		1
	—	25
KINDERGARTENS.—Teachers.—Number entitled to		4
<i>Now serving on tenure</i>		3
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Lillian P. Levine		1
	—	4

CHARLES SUMNER DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—740 in Grades I to VI; 270 in Grades VII and VIII,		1,010
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		998
TEACHERS.—Entitled to 25 grade teachers		25
<i>Now serving on tenure</i>		19
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Elinor Neilon, F. Josephine Rogers		2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster, Joseph I. Whalen; Assistants, Grace D. Lennon, Elizabeth M. Healy		3
	—	24

KINDERGARTENS.— Teachers.— Number entitled to	5
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Marion E. Kelley	1
—	4

CHRISTOPHER GIBSON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 736 in Grades I to VI; 272 in Grades VII and VIII,	1,008
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	996
TEACHERS.— Entitled to 25 grade teachers	25
<i>Now serving on tenure</i>	23
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Agnes J. Boland	1
—	24
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Pauline Miller	1
—	2

DEARBORN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 32 in ungraded class; 9 in special class; 53 in prevocational classes; 1,376 in Grades I to VI; 284 in Grades VII and VIII	1,754
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,729
TEACHERS.— Entitled to 41 grade teachers, 1 teacher of an ungraded class, 1 teacher of a special class and 2 teachers of prevocational classes	45
<i>Now serving on tenure</i>	36
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Regina I. Driscoll, Laura M. Payson,	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Prevocational Assistant, Louise Macdonald; Assistants, Philip J. Bond, Elizabeth A. Crowley, Annie F. Daniel, Anna M. Devin, Annie M. Ducey	6
—	44
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	1
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Mary FitzGerald; Assistant, Margaret A. Mahoney	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Frances R. Kent	1
—	4

DILLAWAY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—16 in special class; 13 in class for conservation of eyesight; 912 in Grades I to VI; 262 in Grades VII and VIII	1,203
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,123
TEACHERS.—Entitled to 29 grade teachers, 1 teacher of a special class, and 1 teacher of a conservation of eyesight class	31
<i>Now serving on tenure</i>	24
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Master's Assistant, Ella M. Donkin; Instructor, Special Class, Dorothy C. Foley; Assistants, Eleanor C. Gallant, Florence M. Hawes	4
	— 28
KINDERGARTENS.—Teachers.—Number entitled to	5
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Catherine M. McCance	1
	— 4

DUDLEY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—16 in special class; 115 in prevocational classes; 829 in Grades I to VI; 170 in Grades VII and VIII	1,130
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,106
TEACHERS.—Entitled to 25 grade teachers, 1 teacher of a special class, and 4 teachers of prevocational classes	30
<i>Now serving on tenure</i>	25
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Prevocational Assistant, Grace L. Pomeroy	1
	— 26
KINDERGARTENS.—Teachers.—Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Helen C. McLean, Bertha A. McPherson	2
	— 4

DWIGHT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—33 in ungraded class; 89 in special classes; 24 in open-air class; 515 in Grades I to VI; 134 in Grades VII and VIII	795
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	777
TEACHERS.—Entitled to 16 grade teachers, 1 teacher of an ungraded class, 6 teachers of special classes, and 1 teacher of an open-air class	24
<i>Now serving on tenure</i>	16

Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Instructors, Special Classes, Mary M. Bickford, Helen L. Burnham, Helen C. Godvin	3
	— 19
KINDERGARTENS.— Teachers.— Number entitled to	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Dora E. Smith	1

EDMUND P. TILESTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 39 in hospital classes, 632 in Grades I to VI; 147 in Grades VII and VIII	818
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	791
TEACHERS.— Entitled to 19 grade teachers, 2 teachers of hospital classes	21
<i>Now serving on tenure</i>	12
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Mary E. Martell, Marguerite R. O'Neill,	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Edith F. Cotton, Gertrude Freiderman, Leonora P. Lordan, James H. Nolan, Madge G. Ross, Lelia P. Severy	6
	— 20
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Gertrude M. Glynn; Assistant, Alma C. McKenna	2
	— 3

EDWARD EVERETT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 1,281 in Grades I to VI; 320 in Grades VII and VIII	1,617
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,596
TEACHERS.— Entitled to 40 grade teachers, 1 teacher of a special class	41
<i>Now serving on tenure</i>	29
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Florence A. Goodfellow; Assistant, Josephine J. Lynch	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Irene Upham; Assistants, Madeline M. Ellis, Margaret M. Giblin, Agnes P. Goggin, Ruby E. Ladd, Mary O. Nolan, Gertrude J. Rhilinger, Marguerite R. Young	8
	— 39

KINDERGARTENS.—Teachers.—Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Dorothy L. Mitchell	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Mabel A. Hermance	1
	— 4

ELIHU GREENWOOD DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—947 in Grades I to VI; 286 in Grades VII and VIII,	1,233
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,218
TEACHERS.—Entitled to 31 grade teachers	31
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Marie A. DeNeill, Madeline B. Murphy,	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Esther E. Brooks, Ruth E. Clarke, Mary M. J. Egar, Corinne M. Faxon, Margaret L. Fisher, Louise J. Smith	6
	— 29
KINDERGARTENS.—Teachers.—Number entitled to	6
<i>Now serving on tenure</i>	4
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Grace M. Dugan, Priscilla E. White	2
	— 6

ELIOT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—61 in ungraded classes; 41 in special classes; 66 in special English classes; 36 in prevocational classes; 1,909 in Grades I to VI; 239 in Grades VII and VIII.	2,352
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,288
TEACHERS.—Entitled to 54 grade teachers, 2 teachers of ungraded classes, 3 teachers of special classes, 2 teachers of special English classes, and 1 teacher of a prevocational class	62
<i>Now serving on tenure</i>	44
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, M. Alice Murphy	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Instructor, Special Class, Mary A. Connors; Prevocational Assistant, Sheba E. Berry; Assistants, Esther E. Cahill, Margaret T. Casey, Mary A. E. Connolly, Olive M. Crane, Bessie T. Crimmins, Margaret A. Ford, Grace F. Laughlin, Alice McNally, Mary M. O'Hearn, Frances S. Rodgers, Marion L. Scannell	13
	— 58

KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistants, Sara F. Cotter, Alice M. Doran	2
	— 4

EMERSON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 1,108 in Grades I to VI; 239 in Grades VII and VIII; 83 in Grade IX	1,430
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,386
TEACHERS.— Entitled to 36 grade teachers	36
<i>Now serving on tenure</i>	24
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Mary C. McMahon	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Alice J. Barry, Mary E. Buckley, Grace M. Curry, Mary B. Flynn, Agnes C. Lavery, Anna E. McGirr, Dorothy J. McNally	7
	— 32

KINDERGARTENS.— Teachers.— Number entitled to	5
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Margaret M. Cody, Mary R. Gray	2
	— 5

EVERETT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919.— 13 in special class; 558 in Grades I to VI; 136 in Grades VII and VIII	707
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	684
TEACHERS.— Entitled to 17 grade teachers, 1 teacher of a special class	18
<i>Now serving on tenure</i>	14
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master's Assistant, Bertha L. Mulloney	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Jessie M. Baker; Assistant, Mary J. O'Day	2
	— 17

KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Helen R. Dyer	1
	— 2

FRANCIS PARKMAN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919.— 532 in Grades I to VI; 133 in Grades VII and VIII,	665
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Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	651
TEACHERS.—Entitled to 16 grade teachers	16
<i>Now serving on tenure</i>	12
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Nellie M. Farnsworth	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Helen C. Conway, Helen R. Jones, Caroline C. Moy	3
	— 16
KINDERGARTENS.—Teachers.—Number entitled to	2
<i>Now serving on tenure</i>	2

FRANKLIN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—17 in special class; 13 in conservation of eyesight class; 853 in Grades I to VI; 120 in Grades VII and VIII	1,003
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	958
TEACHERS.—Entitled to 24 grade teachers, 1 teacher of a special class, and 1 teacher of conservation of eyesight class,	26
<i>Now serving on tenure</i>	23
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Mildred M. Colton	1
	— 24
KINDERGARTENS.—Teachers.—Number entitled to	5
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Committee.</i> —First Assistant, Eleanor M. Osterberg	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Anna M. Hooke	1
	— 4

FREDERIC W. LINCOLN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—550 in Grades I to VI; 149 in Grades VII and VIII	699
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	686
TEACHERS.—Entitled to 17 grade teachers	17
<i>Now serving on tenure</i>	14
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, George W. Gammon; Assistants, Maud B. Kennerson, Lydia M. Gore	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Margaret M. Stapleton	1
	— 18
KINDERGARTENS.—Teachers.—Number entitled to	3
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, N. Medora Thorndike	1
	— 3

GASTON DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 781 in Grades I to VI; 200 in Grades VII and VIII	981
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	968
TEACHERS.—Entitled to 24 grade teachers	24
<i>Now serving on tenure</i>	19
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Master's Assistant, Carrie A. Harlow; First Assistant, Grammar, Clara A. Sharp	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Katherine F. Breen, Ida E. Pennell	2
	— 23
KINDERGARTENS.—Teachers.—Number entitled to	2
<i>Now serving on tenure</i>	2

GEORGE PUTNAM DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 31 in special classes; 1,518 in Grades I to VI; 440 in Grades VII and VIII; 128 in Grade IX	2,117
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,079
TEACHERS.—Entitled to 52 grade teachers, 2 teachers of special classes	54
<i>Now serving on tenure</i>	34
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, A. Florence Pow	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Submaster, E. Joseph Goulart; Master's Assistant, Eliza D. Graham; Assistants, Sigrid B. Anderson, M. Irene Bills, Naomi M. Caldwell, Eleanor P. FitzGerald, Josephine M. Gately, B. Hazel Kane, Florence J. Keelan, John L. Mayer, Cora M. Nicoll, Helen M. Nolan, Marion B. Nye, Marguerite M. Patterson, Marguerite J. Rich, Marjorie G. Smith	16
	— 51
KINDERGARTENS.—Teachers.—Number entitled to	9
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —First Assistant, Mary L. Carey; Assistants, Loyce I. Brandt, Clare Conklin, Minerva A. Hegamyer	4
	— 7

GILBERT STUART DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 820 in Grades I to VI; 96 in Grades VII and VIII	916
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	888

TEACHERS.— Entitled to 23 grade teachers	23
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Alice M. P. Lanigan	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Mabel L. Augusta, Mary V. Driscoll, Margaret M. Hayes, Mary C. Murphy, Muriel L. Staples	5
	— 22
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2

HANCOCK DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 56 in ungraded classes; 45 in special classes; 82 in special English classes; 47 in prevocational classes; 73 in open air classes; 1,697 in Grades I to VI; 199 in Grades VII and VIII; 46 in Grade IX	2,245
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,190
TEACHERS.— Entitled to 48 grade teachers, 2 teachers of ungraded classes, 3 teachers of special classes, 3 teachers of special English classes, 1 teacher of a prevocational class, and 2 teachers of open air classes	59
<i>Now serving on tenure</i>	47
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Margaret M. O'Connell	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Lillian Ginsburg; Assistants, C. Frances Doherty, Mary T. Dowling, Elizabeth Drea, Marion E. Hines, Loretto R. Kelley, Sarah M. Logue, Mary R. Mansfield, Mary L. Walsh	9
	— 57
KINDERGARTENS.— Teachers.— Number entitled to	13
<i>Now serving on tenure</i>	9
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Elizabeth J. Mahoney; Assistant, Marjorie G. Short	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Catherine E. Miley, Nellie M. Sullivan, Ruth G. Sullivan	3
	— 14

HARVARD-FROTHINGHAM DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 19 in special class; 10 in conservation of eyesight class; 836 in Grades I to VI; 248 in Grades VII and VIII	1,113
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,085
TEACHERS.— Entitled to 27 grade teachers, 1 teacher of a special class, and 1 teacher of a conservation of eyesight class,	29

<i>Now serving on tenure</i>	26	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, George H. Pearce; Instructor, Special Class, Elizabeth M. Hoar	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster in charge, Charles E. Quirk; Assistant, Mary C. Falvey	2	30
	—	
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>		4

HENRY GREW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 500 in Grades I to VI; 143 in Grades VII and VIII,	643	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		633
TEACHERS.— Entitled to 16 grade teachers		16
<i>Now serving on tenure</i>	9	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Matilda I. Coveney	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Leonore F. Davis, Blanche L. Donohoe, Bessie A. Lovewell, Margaret E. O'Connor, Florence P. Saunders,	5	15
	—	
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Florence N. Damon	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Cornelia R. Hinkley	1	4
	—	

HENRY L. PIERCE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 15 in special class; 1,207 in Grades I to VI; 368 in Grades VII and VIII; 102 in Grade IX	1,692	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,677
TEACHERS.— Entitled to 42 grade teachers, 1 teacher of a special class		43
<i>Now serving on tenure</i>	29	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Marguerite T. Brooks, Elizabeth M. Carten, Alice M. P. Higgins, Alice C. Manning	4	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster, John J. Connelly; Instructor, Special Class, Anna G. Cauley; Assistants, Helen A. Barry, Birdie O. Bird, Anna M. Buckley, Katherine M. Dullea, Mary E. Kennelly, Mary Kirby, Dora Slepian	9	42
	—	

KINDERGARTEN.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Mary M. McEttrick	1
—	4

HORACE MANN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 8 in ungraded classes; 113 in Grades I to VI; 17 in Grades VII and VIII; 8 in Grade IX	146
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	139
TEACHERS.— Entitled to 14 grade teachers	14
<i>Now serving on tenure</i>	14

HUGH O'BRIEN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 19 in special class; 1,076 in Grades I to VI; 335 in Grades VII and VIII	1,430
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,376
TEACHERS.— Entitled to 35 grade teachers, 1 teacher of a special class	36
<i>Now serving on tenure</i>	27
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Submaster, William G. O'Hare; First Assistant in Charge, Emma F. Wilson; Assistants, Josephine V. Hogan, Emma A. McDonald, Evelyn L. Murphy, Katharine M. Murphy	6
—	33
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3

HYDE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 18 in special class; 535 in Grades I to VI; 164 in Grades VII and VIII	717
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	697
TEACHERS.— Entitled to 17 grade teachers, 1 teacher of a special class	18
<i>Now serving on tenure</i>	18
KINDERGARTENS.— Teachers.— Number entitled to	5
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistants, Ruth A. Gillis, Anna E. Minihan	2
—	5

JEFFERSON DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—19 in special class; 967 in Grades I to VI; 245 in Grades VII and VIII		1,231
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,086
TEACHERS.—Entitled to 30 grade teachers, 1 teacher of a special class		31
<i>Now serving on tenure</i>		27
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, Francis A. O'Brien		1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Master's Assistant in Charge, Margaret T. Dooley; Assistant, Judith Prendergast		2
		— 30
KINDERGARTENS.—Teachers.—Number entitled to		5
<i>Now serving on tenure</i>		3
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Esther B. Cavanagh		1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Frances E. Fiske		1
		— 5

JOHN A. ANDREW DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—24 in ungraded class; 759 in Grades I to VI; 240 in Grades VII and VIII		1,023
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		995
TEACHERS.—Entitled to 25 grade teachers, 1 teacher of an ungraded class		26
<i>Now serving on tenure</i>		21
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Ruth M. Drury, Mary E. O'Connor		2
		— 23
KINDERGARTENS.—Teachers.—Number entitled to		2
<i>Now serving on tenure</i>		1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Marion E. Jones		1
		— 2

JOHN WINTHROP DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—19 in special class; 1,266 in Grades I to VI; 298 in Grades VII and VIII; 64 in Grade IX		1,647
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,621
TEACHERS.—Entitled to 40 grade teachers, 1 teacher of a special class		41

<i>Now serving on tenure</i>	31	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Catherine E. Lenihan	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Marjorie T. Doherty, Gladys P. Eaton, Agnes F. McGoldrick, Margherita R. Milliken, Selma S. Stern, Marguerite G. Sullivan, Helen M. Tanck	7	
	—	39
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Sally S. Allen	1	
	—	4

LAWRENCE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 69 in prevocational classes; 645 in Grades I to VI; 128 in Grades VII and VIII	858	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	839	
TEACHERS.— Entitled to 19 grade teachers, 1 teacher of a special class, and 2 teachers of prevocational classes	22	
<i>Now serving on tenure</i>	20	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Annie Golden	1	
	—	21
KINDERGARTENS.— Teachers.— Number entitled to	1	
<i>Now serving on tenure</i>	1	

LEWIS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 15 in special class; 60 in rapid advancement classes; 29 in prevocational classes; 1,653 in Grades I to VI; 399 in Grades VII and VIII; 161 in Grade IX	2,317	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,291	
TEACHERS.— Entitled to 55 grade teachers, 1 teacher of a special class, 2 teachers of rapid advancement classes, and 1 teacher of a prevocational class	59	
<i>Now serving on tenure</i>	36	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Marion Church, Ruth Holland, Mary A. McCool, Marion E. Mellen	4	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Grammar, Clara E. Oakman; Assistants, Mary M. Byrne, Mary W. Callahan, Louise J. Chambers, Marguerite C. Cloney, Helen T. Cullen, Marion Goldstein, Helen T. Hannon, Dorothy M. Kenney, Margaret E. Maloney, Helen I. Mulliken, Mary G. Murray, Lillian C.		

O'Neil, Mary V. O'Neill, Theresa A. O'Reilly, Eileen A. Roche, Katharine M. Schubarth	17	57
KINDERGARTENS.— Teachers.— Number entitled to	—	6
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
Assistants, Ethel M. Fallon, Marguerita Foley, Gertrude L. Mazur	3	6

LONGFELLOW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 11 in special class; 949 in Grades I to VI; 312 in Grades VII and VIII	1,272
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,261
TEACHERS.— Entitled to 31 grade teachers, 1 teacher of a special class	32
<i>Now serving on tenure</i>	20
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Agnes J. Drea, Emma S. Libourel	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Instructor, Special Class, Mary A. Hartigan; Assistants, Mildred A. Bamberg, Katharine M. Copithorne, Frances B. Dodge, Stella M. Ives, Mary O. Mackey, Helen G. Morgan, Gladys A. Ringer	8
KINDERGARTENS.— Teachers.— Number entitled to	30
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
First Assistant, Agnes R. Maloy	1

LOWELL DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 33 in special classes, 28 in open-air class; 822 in Grades I to VI; 231 in Grades VII and VIII	1,114
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,071
TEACHERS.— Entitled to 26 grade teachers, 2 teachers of special classes, and 1 teacher of an open-air class	29
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, Louis A. White	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
First Assistant in Charge, Jessie K. Hampton; Instructor, Special Class, Eliza B. Bigelow; Assistants, Rose A. Brady, Josephine L. Broderick	4
	26

KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Edith H. Newcomb	1
	— 4

MARTIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 536 in Grades I to VI; 157 in Grades VII and VIII	693
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	679
TEACHERS.— Entitled to 17 grade teachers	17
<i>Now serving on tenure</i>	17
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Winnifred M. McEvoy, Helen G. Pepper	2
	— 4

MARY HEMENWAY DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 1,539 in Grades I to VI; 410 in Grades VII and VIII; 143 in Grade IX	2,092
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,070
TEACHERS.— Entitled to 52 grade teachers	52
<i>Now serving on tenure</i>	32
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Emily A. Brady, Margaret M. Riley	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Annie F. Barry, Louise F. Barry, Agnes G. Brennan, Ruth I. Byrne, Charlotte L. Childs, Agnes M. Golden, Elizabeth A. Good, Madeline F. Goodale, Ellen C. Hennessey, John J. Lally, Louise E. Mooney, Grace A. Murray, Grace D. O'Brien, May A. O'Brien, Bridget C. Ridge, Ethel M. Ruth	16
	— 50
KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Loretta W. Dinn; Assistants, Elizabeth M. Laurie, Olivia F. O'Donnell	3
	— 6

MATHER DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 130 in prevocational classes; 1,828 in Grades I to VI; 430 in Grades VII and VIII	2,404
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,351
TEACHERS.— Entitled to 56 grade teachers, 1 teacher of a special class, and 4 teachers of prevocational classes	61

<i>Now serving on tenure</i>	44	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Margaret B. Lynch, Marion A. Maguire,	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster, Raymond H. Young; Instructor, Special Class, Linna M. Ferrer; Assistants, Mary M. Cronin, Inez M. Jameson, Gertrude N. Mendell, Mary F. Nolan, Marion E. Rafferty, Elizabeth F. Sarjeant, Agnes G. White	9	55
KINDERGARTENS.— Teachers.— Number entitled to	6	
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Evalyn M. Martin	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Edith G. Hunter; Assistants, Elizabeth B. Elcock, Jessie E. Small	3	6

MINOT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 141 in Grades I to VI; 431 in Grades VII and VIII,	572	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	555	
TEACHERS.— Entitled to 14 grade teachers	14	
<i>Now serving on tenure</i>	10	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Eleanor H. Matson, Marguerite T. Roncs	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Katherine Moran	1	13
KINDERGARTENS.— Teachers.— Number entitled to	2	
<i>Now serving on tenure</i>	1	

NORCROSS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 23 in ungraded class; 76 in open-air classes; 8 in conservation of eyesight class; 668 in Grades I to VI; 188 in Grades VII and VIII	963	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	954	
TEACHERS.— Entitled to 21 grade teachers, 1 teacher of an ungraded class, 2 teachers of open-air classes and 1 teacher of a conservation of eyesight class	25	
<i>Now serving on tenure</i>	22	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Anne D. Allard	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant in Charge, Carrie A. Whitaker	1	24

KINDERGARTENS.— Teachers.— Number entitled to	3
<i>Now serving on tenure</i>	4

OLIVER HAZARD PERRY DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 7 in ungraded class (Spectacle Island); 17 in special class; 575 in Grades I to VI; 184 in Grades VII and VIII	783
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	767

TEACHERS.— Entitled to 19 grade teachers, 1 teacher of an ungraded class, and 1 teacher of a special class	21
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<i>Now serving on tenure</i>	16
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Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Anne M. Cassidy	1
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Appointed: <i>To serve for the term ending August 31, 1920.</i> — Master's Assistant in Charge, Louise A. Pieper	1
	18

KINDERGARTENS.— Teachers.— Number entitled to	2
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<i>Now serving on tenure</i>	1
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Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Elizabeth Pishon	1
	2

OLIVER WENDELL HOLMES DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 30 in special classes; 2,852 in Grades I to VI; 740 in Grades VII and VIII	3,622
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Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	3,586
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TEACHERS.—Entitled to 90 grade teachers, 2 teachers of special classes	92
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<i>Now serving on tenure</i>	63
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Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master's Assistant, Anna A. Maguire; Assistants, Margaret M. Biggy, Miriam Cohen, Mildred A. Hersey	4
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Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Grammar, Mary H. Brick; Assistants, Jennie F. Boles, Sarah B. Brennan, Madeline M. Daley, Dorothy L. Devine, Mary M. Facey, Anna M. Galvin, Lillian N. Galvin, Alice L. Gannon, Grace W. Gormley, Irene L. Hines, Katherine M. Kelly, Helen C. M. Lynch, Alice E. Manning, Margaret M. J. McAndrew, Marie E. Murray, Dorothy M. O'Brien, Margaret J. O'Brien, Sadie L. Siskind, Jeannette A. Wall	20
	87

KINDERGARTENS.— Teachers.— Number entitled to	13
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<i>Now serving on tenure</i>	4
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Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Ethel M. Lane; Assistants, Winifred R. Cavanagh, Ida M. Fields, Charlotte M. McMorro	4
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Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
Assistant, Hattie E. Fisher, Ruth K. FitzGerald	2	10
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PHILLIPS BROOKS DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—17 in special class; 29 in rapid advancement class; 1,185 in Grades I to VI; 262 in Grades VII and VIII	1,493
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,469
TEACHERS.—Entitled to 36 grade teachers, 1 teacher of a special class, and 1 teacher of a rapid advancement class	38
<i>Now serving on tenure</i>	25
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, John M. McDonnell; Master's Assistant, Eunice C. Hearn; Assistant, Adeline C. Leve	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Instructor, Special Class, Helen F. Cummings; Assistants, Adelaide R. Burke, Alice E. Donoghue, Nellie G. Fannon, Anna C. Gallagher, Clarice H. McIntyre, Frances M. Murphy, Anna E. Scully	8
	— 36
KINDERGARTENS.—Teachers.—Number entitled to	9
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1920.</i> —First Assistant, Mabel V. Mulrey; Assistants, Dorothy M. Robinson, Helen M. Sughrue, Goldie G. West, Irene H. Walsh	5
	— 8

PRESCOTT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—16 in special class; 56 in prevocational classes; 430 in Grades I to VI; 137 in Grades VII and VIII	639
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	626
TEACHERS.—Entitled to 14 grade teachers, 1 teacher of a special class, and 2 teachers of prevocational classes	17
<i>Now serving on tenure</i>	16
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Instructor, Special Class, Maria T. Cogger	1
	— 17
KINDERGARTENS.—Teachers.—Number entitled to	1
<i>Now serving on tenure</i>	1

PRINCE DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919.—794 in Grades I to VI; 265 in Grades VII and VIII,	1,059
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,006

TEACHERS.—Entitled to 26 grade teachers	26
<i>Now serving on tenure</i>	19
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistants, Constance Bisbee, Marion A. Fields, M. Elizabeth	
Gay, Vera A. Kingsford, Mae B. Reynolds	5
	— 24
KINDERGARTENS.—Teachers.—Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistant, Marion E. Godfrey	1
	— 2

QUINCY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging	
on any one day between September 1, 1918, and April 1,	
1919,—47 in ungraded class; 29 in special classes; 84 in	
prevocational classes; 103 in open-air classes; 611 in Grades	
I to VI; 116 in Grades VII and VIII	990
Average number of pupils belonging for the period September	
1, 1918, to April 1, 1919	769
TEACHERS.—Entitled to 18 grade teachers, 1 teacher of an	
ungraded class, 2 teachers of special classes, 3 teachers of	
prevocational classes, and 3 teachers of open air classes	27
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Com-</i>	
<i>mittee.</i> —Assistant, Isabel J. Mulkern	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Submaster, William S. Lenihan; Instructor, Special Class,	
Mildred E. Frazier; Assistants, Crystal D. Bird, Mary J.	
McLaughlin	4
	— 27
KINDERGARTENS.—Teachers.—Number entitled to	9
<i>Now serving on tenure</i>	5
Appointed: <i>To serve during the pleasure of the School Com-</i>	
<i>mittee.</i> —Assistant, Alice L. Linnehan	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> —	
Assistants, Dorothy V. Madden, Frances E. O'Neill, T.	
Marion Parmelee, Grace F. Sullivan	4
	— 10

RICE DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging	
on any one day between September 1, 1918, and April 1,	
1919,—26 in ungraded class; 604 in Grades I to VI; 187 in	
VII and VIII	817
Average number of pupils belonging for the period September	
1, 1918, to April 1, 1919	804
TEACHERS.—Entitled to 20 grade teachers, 1 teacher of an	
ungraded class	21
<i>Now serving on tenure</i>	17
Appointed: <i>To serve during the pleasure of the School Com-</i>	
<i>mittee.</i> —Assistants, Mary A. C. Doyle, Lillian E. Enos	2

Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
Assistant, Kathleen G. Tobin	1	20
KINDERGARTENS.— Teachers.— Number entitled to	1	
<i>Now serving on tenure</i>	1	

ROBERT G. SHAW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 1,019 in Grades I to VI; 248 in Grades VII and VIII; 81 in Grade IX	1,348	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,329	
TEACHERS.— Entitled to 33 grade teachers	33	
<i>Now serving on tenure</i>	20	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
Assistants, Mary L. Bradley, Marion E. Curley, Julia A. Driscoll, Alice C. English, Bertha O. Ives, Mary M. Lordan, Margaret F. Murray, Dorothy G. O'Connor, Helen E. Sullivan, Elizabeth L. Willis	10	30
KINDERGARTENS.— Teachers.— Number entitled to	3	
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
Assistant, Leone C. Sheen	1	3

ROGER WOLCOTT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 2,148 in Grades I to VI; 523 in Grades VII and VIII	2,687	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,669	
TEACHERS.— Entitled to 67 grade teachers, 1 teacher of a special class	68	
<i>Now serving on tenure</i>	32	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Grammar, Mary G. Woodman; Assistants, Anna B. Klein, Helen F. McGlinchy, Alice K. Rourke	4	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —		
First Assistant in Charge, Bertha C. Quinnam; Assistants, Hilda L. Anderson, Rose Arenson, Alvia A. Colton, Irene E. Cox, Esther E. Cunningham, Florence Driscoll, Marguerite Elliott, Frances A. Flynn, Regina Hearn, Dorothy Kalker, Marion R. Kanter, Lillian H. Kenney, Helen R. Leary, Mary C. Levins, Margaret McDonald, Frances B. Mea, Pauline E. Miley, Jessie G. Ogilvie, Eileen E. Rogers, Dora F. Smith, Gertrude A. Smith, Ellen G. Sullivan, Margaret P. Sullivan, Esther P. Thumim, Edith A. West	26	62

KINDERGARTENS.— Teachers.— Number entitled to	13
<i>Now serving on tenure</i>	5
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Mary L. Walsh	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant, Josephine L. Kelly; Assistants, Ellen P. Colleran, Lucy E. McCarthy, Mary A. Norton, Leah R. Sheen, Maria L. Whittredge	6
	— 12

SAMUEL ADAMS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 2,072 in Grades I to VI; 324 in Grades VII and VIII	2,412
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	2,369
TEACHERS.— Entitled to 60 grade teachers, 1 teacher of a special class	61
<i>Now serving on tenure</i>	37
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Jeannette Ascolillo, Luetta C. Bolan, Minnie Colitz, Adeline R. Cropper, Mary E. Driscoll, Margaret F. Duffy, Gertrude M. Finn, A. Loretto Garrity, Bessie M. Lassen, Bessie MacBride, John J. Mahoney, Annie V. McGonagle, Dorothy S. Starratt	13
	— 50
KINDERGARTENS.— Teachers.— Number entitled to	14
<i>Now serving on tenure</i>	6
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Anna H. Drown	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Edith M. Anderson, Frances M. Brierly, Gladys L. Brown, Mary L. Giblin, Frances M. Miley	5
	— 12

SHERWIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 112 in special classes; 67 in prevocational classes; 616 in Grades I to VI; 92 in Grades VII and VIII	887
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	860
TEACHERS.— Entitled to 18 grade teachers, 7 teachers of special classes, and 2 teachers of prevocational classes	27
<i>Now serving on tenure</i>	20
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Mildred C. Sullivan	1
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster, William P. McDonough; First Assistant in Charge of Special Classes, Katherine C. Coveney; Instructors, Special Classes, Emily A. Gunn, Anna E. Murphy,	

Anna C. Murdock, Grace A. Taylor; Prevocational Assistant, Ellen E. Melleney	7	
	—	28
KINDERGARTENS.— Teachers.— Number entitled to		1
<i>Now serving on tenure</i>		1

SHURTLEFF DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919.— 27 in ungraded class; 614 in Grades I to VI; 157 in Grades VII and VIII		798
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		778
TEACHERS.— Entitled to 19 grade teachers, 1 teacher of an ungraded class		20
<i>Now serving on tenure</i>	14	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Agnes C. Loughlin	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Sadie G. Kennedy, Marie C. Reardon, Anastasia K. White	3	
	—	18
KINDERGARTENS.— Teachers.— Number entitled to		2
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Adelaide W. Andrews	1	
	—	2

THEODORE LYMAN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 21 in special class; 110 in prevocational classes; 1,096 in Grades I to VI; 165 in Grades VII and VIII		1,392
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,339
TEACHERS.— Entitled to 31 grade teachers, 1 teacher of a special class, and 4 teachers of prevocational classes		36
<i>Now serving on tenure</i>	19	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Ethel M. Hiltz, Grace H. Lonergan, Theresa A. Ratta	3	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Prevocational Assistant, Claire A. Bulger, Assistants, E. Cecelia Bowen, Lillian R. Burk, Bessie M. Cosgrove, Mildred M. Doyle, Louisa A. Gilbert, Kathryn M. Goff, Veronica R. Grant, Anna L. Lawler, Louise W. Vaughan	10	
	—	32
KINDERGARTENS.— Teachers.— Number entitled to		7

<i>Now serving on tenure</i>	2	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Celia T. Tischler	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Catherine Cohen, Helen E. Freeman, Eva A. Sanger	3	
	—	6

THOMAS GARDNER DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 1,217 in Grades I to VI; 208 in Grades VII and VIII,	1,425	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,365	
TEACHERS.— Entitled to 35 grade teachers	35	
<i>Now serving on tenure</i>	27	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Alice P. George, Alice M. Smith	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Submaster, James E. Dolan	1	
	—	30
KINDERGARTENS.— Teachers.— Number entitled to	6	
<i>Now serving on tenure</i>	4	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Flora E. Ellis	1	
	—	5

THOMAS N. HART DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 16 in special class; 834 in Grades I to VI; 197 in Grades VII and VIII	1,047	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,034	
TEACHERS.— Entitled to 26 grade teachers, 1 teacher of a special class	27	
<i>Now serving on tenure</i>	23	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, Charles A. A. Weber; Assistant, Emma M. Gardner	2	
	—	25
KINDERGARTENS.— Teachers.— Number entitled to	3	
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Ruth B. Todd	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Florine K. Williamson	1	
	—	4

ULYSSES S. GRANT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 37 in ungraded class; 19 in special class; 1,007 in Grades I to VI; 236 in Grades VII and VIII; 68 in Grade IX,	1,367	
--	-------	--

Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,340
TEACHERS.— Entitled to 33 grade teachers, 1 teacher of an ungraded class; and 1 teacher of a special class	35
<i>Now serving on tenure</i>	18
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, Frederick J. Murphy; Instructor, Special Class, Edith M. Perry; Assistants, Joanna Z. Connell, Sara E. Kirwen, Esther E. Larsen, John F. Lynch, Katherine A. Mahoney	7
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Catherine M. Burke, Ruth I. Larson, Ethel F. Love, Margaret M. McGowan, Anna G. Riordan, Dorothy Rosenaur, Dora Slepian, Katherine Vernon	8
	— 33
KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	4
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Muriel E. Lowell, Josephine McCarthy	2
	— 6

WARREN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 767 in Grades I to VI; 200 in Grades VII and VIII,	967
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	853
TEACHERS.— Entitled to 24 grade teachers	24
<i>Now serving on tenure</i>	18
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Elizabeth M. Hayes, Elizabeth A. Killion	2
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Mildred F. Carroll, Loretta I. McDonough, Beatrice M. McNally	3
	— 23
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3

WASHINGTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 19 in special class; 11 in special English class; 68 in open air class; 1,202 in Grades I to VI; 241 in Grades VII and VIII	1,541
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,496
TEACHERS.— Entitled to 36 grade teachers, 1 teacher of a special class; and 2 teachers of open-air classes	39

<i>Now serving on tenure</i>	29	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, James E. Lynch; Assistant, Annie E. Molloy	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Instructor, Special Class, Flora E. Hinman; Assistants, Alice E. Gibbons, Edwina M. Goff, Mary E. Haggerty, Catherine G. McCool, M. Frances McNellis	6	37
KINDERGARTENS.—Teachers.—Number entitled to		7
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —First Assistant, Josephine A. Hurley; Assistants, Josephine L. Cauley, Louise E. Coyle, Florence E. Johnson	4	6

WASHINGTON ALLSTON DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,—796 in Grades I to VI; 300 in Grades VII and VIII,	1,096	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,070	
TEACHERS.—Entitled to 27 grade teachers	27	
<i>Now serving on tenure</i>	19	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Mary F. Reagan	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistants, Esther L. Carley, Florence A. Cose, Jane V. Gearon, Mary G. Hughes, Mary E. Loughman, Edith B. Ricles	6	26
KINDERGARTENS.—Teachers.—Number entitled to		2
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> —Assistant, Florence M. Stern	1	2

WELLS DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919, 46 in special classes; 71 in open air classes; 12 in conservation of eyesight class; 1,389 in Grades I to VI; 226 in Grades VII and VIII	1,744	
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919	1,732	
TEACHERS.—Entitled to 40 grade teachers, 3 teachers of special classes, 2 teachers of open-air classes, and 1 teacher of a conservation of eyesight class	46	
<i>Now serving on tenure</i>	33	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Margaret G. Ford, Gertrude R. Lynch, Elizabeth J. Miley, Louise K. Morss, Margaret G. Stanwood,	5	

Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Odessa B. Forknall; Assistants, Laura B. Tolman, Charlotte M. White	3	
	—	41
KINDERGARTENS.— Teachers.— Number entitled to		8
<i>Now serving on tenure</i>	4	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — First Assistant, Dora L. Adler; Assistant, Lydia W. Howes	2	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistants, Mathilde L. Hackebarth, Marie L. Hayes	2	
	—	8

WENDELL PHILLIPS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 30 in ungraded class; 90 in special classes; 826 in Grades I to VI; 386 in Grades VII and VIII		1,332
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		1,298
TEACHERS.— Entitled to 30 grade teachers, 1 teacher of an ungraded class; 6 teachers of special classes		37
<i>Now serving on tenure</i>	28	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Instructor, Special Class, Alice Meston; Assistants: Margaret E. Kerrigan, Mary E. Manning, Ruth H. Soelle	4	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — First Assistant in Charge, Special Class, Cora E. Bigelow; Instructors, Special Classes, Lucy A. Fitzgerald, Frances E. Webster; Assistant, Minnie Silverman	4	
	—	36

WILLIAM E. RUSSELL DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging on any one day between September 1, 1918, and April 1, 1919,— 15 in special class; 690 in Grades I to VI; 211 in Grades VII and VIII		916
Average number of pupils belonging for the period September 1, 1918, to April 1, 1919		871
TEACHERS.— Entitled to 22 grade teachers, 1 teacher of a special class		23
<i>Now serving on tenure</i>	22	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Instructor, Special Class, Catharine E. Reardon	1	
	—	23
KINDERGARTENS.— Teachers.— Number entitled to		2
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve for the term ending August 31, 1920.</i> — Assistant, Barbara E. Sheridan	1	
	—	2.

UNASSIGNED TEACHER.

ELEMENTARY GRADES.—Appointed: *To serve for the term ending August 31, 1920.*—Assistant, Ellen S. Bloomfield.

DAY SCHOOL FOR IMMIGRANTS.

Appointed: *To serve for the term ending August 31, 1920.*—

Instructors, Ethel D. Hodson, Caroline A. Shay 2

CONSERVATION OF EYESIGHT CLASSES.

Appointed: *To serve for the term ending August 31, 1920.*—

Instructors, A. Harriet Haley, Alice G. Lincoln 2

SPEECH IMPROVEMENT CLASSES.

Now serving on tenure 2

Appointed: *To serve during the pleasure of the School Committee.*—Instructor, Mary A. J. Brady 1

Appointed: *To serve for the term ending August 31, 1920.*—

Instructor in Charge, Theresa A. Dacey; Instructors, Alice G. Mason, Desire E. Nickels, Mary J. O'Neill, Gertrude M. Reilly 5

8

MANUAL ARTS.

Now serving on tenure 48

Appointed: *To serve during the pleasure of the School Committee.*—Instructors, Shopwork, Edward D. Dee, Florence P. Donelson, William A. England; Assistant Instructors in Manual Training, Caroline K. Blackburn, Teresa F. Gleason, Lettie R. Moore 6

Appointed: *To serve for the term ending August 31, 1920.*—

Shop Foremen, Francis V. Kenney, John Knight, Andrew J. Leahy, George G. Rose, Patrick J. Smith, Orren R. Tarr; Foremen, Shopwork, J. Maynard Cheney, Celia B. Hallstrom, Arvid J. Wahlstrom; Shop Instructors, Norman P. Barker, Abraham S. Bernstein, Frederic A. Coates, Frederick L. Eames, William P. Grady, Carl E. Janson, John A. Lane, Walter F. Perry, Clarence R. Rees, William M. Rogers, Grover C. Russell, Alden T. Stubbs, Emil W. Zepp; Instructors, Shopwork, George Adamson, Clarence H. Garland, Edward W. Malone, William E. O'Connor, Frederick E. Rau, Percy R. Stewart, Francis O. Wood, William L. Young 30

84

HOUSEHOLD SCIENCE AND ARTS.

COOKERY.

Now serving on tenure 33

Appointed: *To serve during the pleasure of the School Committee.*—Alice W. Clement, Catharine Sheehan 2

Appointed: *To serve for the term ending August 31, 1920.*—

Alice G. Caine, Agnes L. Callaghan, Ernestine Y. Cox, Mary M. Curry, Gertrude A. Foley, Mary M. Giblin, Agnes E. Perkins, Alberta M. Whitney 8

43

Sewing.

Now serving on tenure 45

Appointed: To serve during the pleasure of the School Committee.— Clara D. Crandall, Mary A. Shane. 2

Appointed: To serve for the term ending August 31, 1920.—

Agnes L. Anderson, Mary L. Bishop, Catherine C. Cogan,
Ethel M. Hill, Mary B. Howard, Odette M. Lloyd, Helen
MacNeil, Marie L. Maguire, Mary A. F. Malloy, Adeline H.
McCormick, Catherine L. Murray, Helen R. Smith, Josephine
G. Stephens, Margaret H. Sullivan, Margaret F. Tivnan, 15

— 62

PART III.

REAPPOINTMENTS OF TEACHERS OF PHYSICAL
TRAINING AND MILITARY DRILL.

PHYSICAL TRAINING.

Appointed: *To serve during the pleasure of the School Committee.*—Instructor in Physical Training, James H. Crowley, 1

MILITARY DRILL.

Now serving on tenure 3
 Appointed: *To serve for the term ending August 31, 1920.*—
 Assistant Instructor of Military Drill, George S. Penney . . . 1
 ————— 4

PHYSICAL TRAINING INSTRUCTORS IN NORMAL, LATIN,
DAY HIGH AND INDUSTRIAL SCHOOLS.

Now serving on tenure:
 Girls' Latin School 1
 Brighton High School 1
 Girls' High School 2
 Roxbury High School 1
 South Boston High School 1
 West Roxbury High School 1
 ————— 7

Appointed: *To serve during the pleasure of the School Committee.*—Normal School, Instructor in Physical Training,
 Lulu A. Donovan.
 Charlestown High School, Instructor in Physical Training,
 Mary F. Birch.
 Dorchester High School, Instructor in Physical Training,
 Helen G. Dolan.
 East Boston High School, Instructor in Physical Training,
 Pauline Bromberg.
 Girls' High School, Assistant Instructor in Physical Training,
 Margaret L. McCarthy.
 Roxbury High School, Assistant Instructor in Physical
 Training, Mary E. Johnson 6
 Appointed: *To serve for the term ending August 31, 1920.*—
 Girls' Latin School, Assistant Instructor in Physical Training,
 Eleanor H. Quinlan.
 Dorchester High School, Assistant Instructors in Physical
 Training, Josephine U. Heffernan, Cyrilla R. Mitsch.

Girls' High School, Assistant Instructor in Physical Training,
Genevieve A. Burns.

High School of Practical Arts, Instructor in Physical Training,
Bessie W. Howard.

Hyde Park High School, Instructor in Physical Training,
Agnes S. Thompson.

Roxbury High School, Assistant Instructor in Physical Training,
Laura M. West.

South Boston High School, Assistant Instructor in Physical Training,
Angela C. McManus.

West Roxbury High School, Assistant Instructor in Physical Training,
Katharine French.

Trade School for Girls, Instructor in Personal and Shop Hygiene,
Grace F. Johnson 10

— 23

Respectfully yours,

FRANK V. THOMPSON,
Superintendent of Public Schools.

SCHOOL DOCUMENT NO. 8—1919
BOSTON PUBLIC SCHOOLS
COURSE OF STUDY FOR THE
HIGH SCHOOL OF COMMERCE



BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, September 10 and 17, 1906.

Adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, May 27, 1907.

Revised course adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, April 17, 1911.

Revised course adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, May 6, 1912.

Revised course adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, February 15, 1915.

Revised course adopted.

Attest:

ELLEN M. CRONIN,
Acting Secretary.

IN SCHOOL COMMITTEE, May 24, 1917.

Revised course adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, June 2, 1919.

Revised course adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

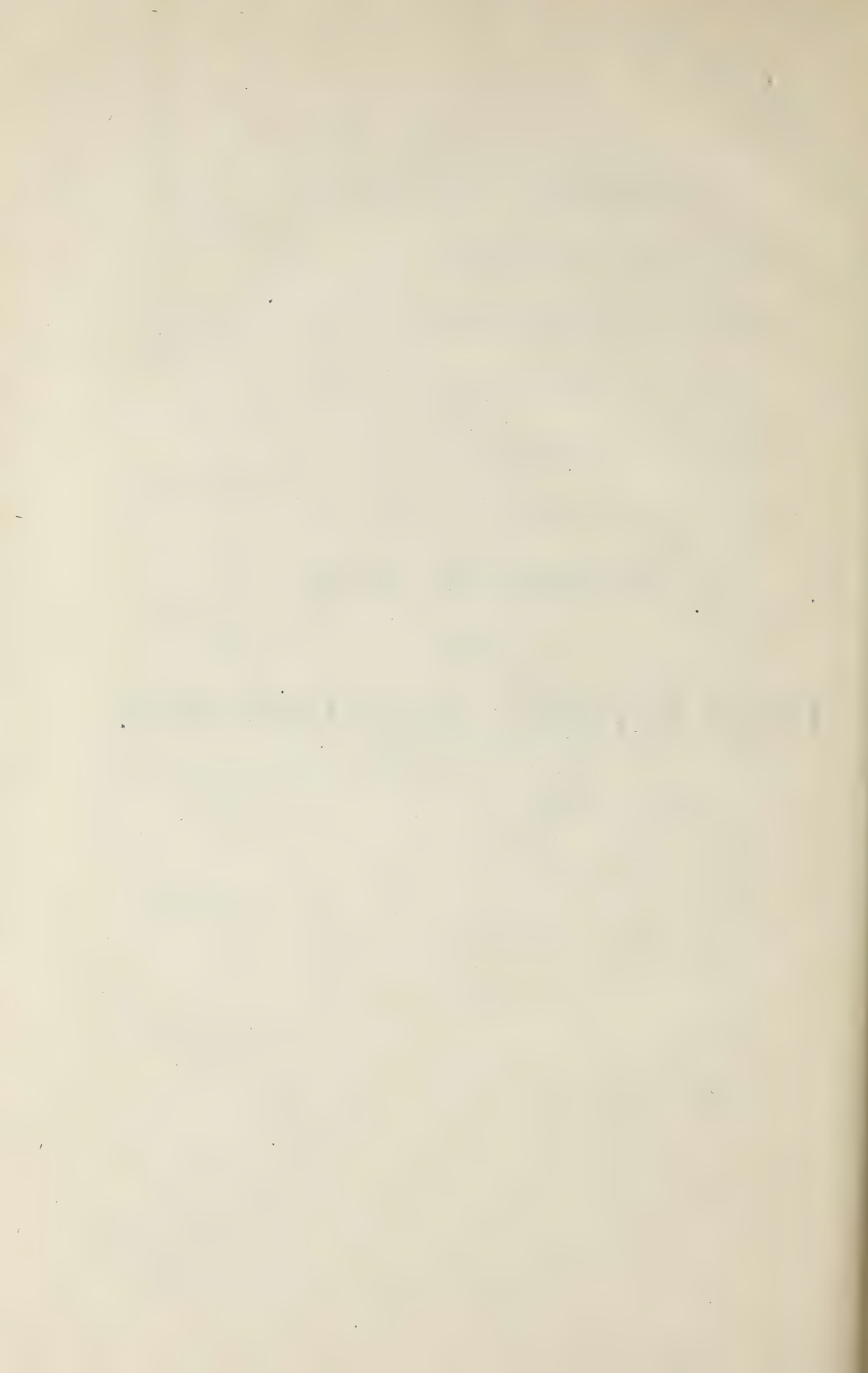
[2,000-5-13-'12.]
[1,500-4-30-'14.]
[3,000-2-17-'15.]
[2,000-5-28-'17.]
[2,000-6-2-'19.]

COURSE OF STUDY

FOR THE

HIGH SCHOOL OF COMMERCE

[Avenue Louis Pasteur, the Fenway.]



HIGH SCHOOL OF COMMERCE.

INTRODUCTION.

1. Pupils are admitted to the High School of Commerce only upon the presentation of an admission card signed by the Superintendent. Admission cards are granted by the Superintendent:

- (a) To graduates of the day elementary schools.
- (b) To graduates of private day schools approved by the Board of Superintendents.
- (c) To graduates of the evening elementary schools.
- (d) To graduates of day elementary schools of cities and towns of Massachusetts approved by the Board of Superintendents.
- (e) To those who have successfully passed examinations authorized or given by the Board of Superintendents.
- (f) To those pupils who have attended day high schools other than those of Boston, who present evidence of competency satisfactory to the Head Master and approved by the Board of Superintendents, which may consist of certificates signed by the proper authorities or of examinations. The Head Master will determine the subjects and the number of points for which advanced standing may be given, and will issue certificates therefor.

2. Examinations for admission to day high schools are held on the Friday immediately following the second Wednesday in September.

3. The school is in session six hours per day for five days in the week. Of this time, ten minutes are given to opening exercises and forty-three minutes to recess and passing. The rest of the time is divided as follows: Seven periods of forty-one minutes each; a period of ten minutes for setting-up drill.

THE COURSE OF STUDY.

The object of the High School of Commerce is to give to boys a sound preparation for commercial life. To accomplish this purpose the course of study provides instruction of two kinds: First, instruction in general high school subjects; second, instruction of high school grade in the specific subject, commerce. The first sort of instruction is intended to supply the indispensable elements of general knowledge or liberal culture. Instruction of this kind is provided in the general groups of studies usually pursued in high schools, *except* that of ancient languages. It is to be noted, however, that the general subjects are all taught with the constant view of preparing the pupil to use them in business life; thus, English, the modern languages, history, etc., are made to serve as instruments for general culture, and yet are taught with an eye to their special commercial applications. In like manner all instruction in the school is made to serve the special vocational purpose for which the school exists. This purpose is further emphasized by centering the general subjects about the second kind of instruction mentioned above, namely, specific work in commerce. This special work and the special bent given to the general subjects combine to bring out strongly the vocational character of the school.

Diplomas are awarded at the end of the fourth year to those who have satisfactorily completed the course of study.

[EXTRACT FROM SCHOOL DOCUMENT NO. 6, 1919.]

The distinctive aim of the High School of Commerce is to train boys for business life. To accomplish this end, the school works in two ways. First, it provides instruction in the history, conditions and principles of business; second, it provides opportunity for practical experience through aiding the boy to secure work at the Christmas season, during the summer vacation and at various other periods of the year. In order that each individual may be specially fitted to take a definite place in the world of commerce, the pupil is asked to choose, at the end of the second year, one of three courses. These courses are as follows: The merchandising (buying and selling), the clerical (emphasizing stenography), and the accounting course. Thus at the end of four years a boy knows a great deal about the essentials of business; he knows enough about some side of business activity to be of immediate use to his employer; and he has had sufficient practical experience to enable him to make an intelligent choice of the type of career for which he is best fitted, thus guarding against the mistakes so likely to attend complete inexperience.

During the first year a boy studies the following subjects: English, modern language (German, Spanish or French), elementary bookkeeping, general science, mathematics (commercial arithmetic and algebra). During the second year he continues all these studies with the exception of general science. In its place he takes economic history and geography. He also begins typewriting. At the end of the second year he chooses one of the three courses already referred to, *i. e.*, secretarial, merchandising or accounting. Separate programs of study have been provided for these different courses, so that a boy will be well fitted to take up the particular department of business activity for which he chooses to prepare.

Throughout the four years regular class work is supplemented by talks given weekly by business men.

The school is not narrowly vocational. Here, as in the general high school, the pupil is taught to appreciate the higher ideals and developments of modern civilization; he is trained to be not only a business man but an educated and useful citizen. For boys specially gifted, the school makes additional provision by fostering various activities, represented by the orchestra, the band, the glee club, the debating societies, the school magazine and the athletic association.

In no sense is the High School of Commerce a preparatory school for higher institutions; neither is it of the strictly clerical type. It trains boys to become practical, energetic men of business, and intelligent, well behaved members of society.

Any elementary school graduate who is ambitious to enter business life directly from high school should consider the aim, resources and advantages of the school. The opportunities in business are many and varied. There is always a great demand for boys with good records who have specific business training. The constant aim of the school is to make it of as much value as possible to its pupils and to the business men of the city.

The school is located in the Fenway, on Avenue Louis Pasteur, near Longwood avenue.

HIGH SCHOOL OF COMMERCE.

COURSE OF STUDY.

FIRST YEAR.

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	5	5
German, Spanish or French (to be carried for 4 years, except by pupils who take Secretarial Course for third and fourth years).....	4	4
Penmanship, first half.....	5	5
Business Knowledge and Practice, second half.....		
Hygiene, two-fifths year.....	5	5
Physics, three-fifths year.....		
Mathematics.....	4	4
Boston; history, geography and industry.....	2	2
Military Drill.....		2
Choral Practice.....		1
Assembly.....		1
	25	29

SECOND YEAR.

<i>Required.</i>		
English.....	5	5
A Modern Language. (See first year.).....	4	4
Bookkeeping.....	5	5
Commercial Geography.....	4	4
Mathematics.....	5	5
Commercial Design.....		1
Typewriting.....		1
Assembly.....		1
Military Drill.....		2
	23	28

COURSE OF STUDY.—*Continued.*

THIRD YEAR.

Secretarial Course.

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	4	4
Economic History.....	5	5
Civics.....	2	2
Bookkeeping.....	3	3
Stenography and Typewriting.....	9	9
Modern Language.....	3	3
Military Drill.....		2
Assembly.....		1
	26	29
<i>Extra.</i>		
Commercial Design.....		3
Glee Club.....		1
Orchestra.....		1

COURSE OF STUDY.— *Continued.*THIRD YEAR.— *Concluded.**Merchandising and Accounting Courses.*

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	4	4
Economic History.....	5	5
Civics.....	2	2
A Modern Language. (See first year.).....	4	5
Chemistry.....	4	5
Military Drill.....		2
Typewriting.....		1
Assembly.....		1
	19	25
<i>Elective.</i>		
One of the following subjects required:		
Bookkeeping.....	5	5
Plane Geometry.....	5	5
<i>Extra.</i>		
Commercial Design.....		3
Glee Club.....		1
Orchestra.....		1

COURSE OF STUDY.— *Continued.*

FOURTH YEAR.

Secretarial Course.

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	4	5
Commercial Law.....	2	2
Economics.....	4	5
Stenography and Typewriting.....	11	10
Military Drill.....		2
Assembly.....		1
	21	25
<i>Elective.</i>		
One of the following subjects required:		
Chemistry Applications.....	5	5
Bookkeeping.....	5	5
Physics, Applications.....	5	5
Commercial Design.....		10
Advanced Arithmetic.....	5	5
Modern Language.....	5	5
<i>Extra.</i>		
Commercial Design.....		3
Glee Club.....		1
Orchestra.....		1

COURSE OF STUDY.— *Continued.*FOURTH YEAR.— *Continued.**Merchandising Course.*

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	4	5
Commercial Law.....	2	2
A Modern Language. (See first year.).....	4	4
Merchandising.....	5	5
Economics.....	4	5
Military Drill.....		2
Typewriting.....		1
Assembly.....		1
	19	25
<i>Elective.</i>		
One of the following subjects required:		
Bookkeeping.....	5	5
Algebra.....	5	5
Chemistry, Applications.....	5	5
Foreign Trade.....	5	5
Physics, Applications.....	5	5
Navigation.....	5	5
Advanced Arithmetic, Insurance and Investments.....	5	5
<i>Extra.</i>		
Commercial Design.....		10
Glee Club.....		1
Orchestra.....		1

COURSE OF STUDY.— *Concluded.*FOURTH YEAR.— *Concluded.**Accounting Course.*

<i>Required.</i>	Periods per Week of Home Preparation.	Periods per Week of Recitation.
English.....	4	5
Commercial Law.....	2	2
A Modern Language. (See first year.).....	4	4
Economics.....	4	5
Bookkeeping, Accounting.....	10	10
Military Drill.....		2
Typewriting.....		1
Assembly.....		1
	24	30
<i>Extra.</i>		
Foreign Trade.....	5	5
Chemistry, Applications.....	5	5
Physics, Applications.....	5	5
Navigation.....	5	5
Advanced Arithmetic, Insurance and Investments.....	5	5
Portuguese.....	5	5

PROGRAM OF THE HIGH SCHOOL OF COMMERCE.

ARRANGED BY SUBJECTS.

ENGLISH.— Five periods per week for three years and four periods per week for one year.

MODERN LANGUAGE.— German, French or Spanish, four periods per week for four years.

PORTUGUESE.— Five periods per week for fourth year.

ECONOMICS AND HISTORY.— General and economic history, five periods per week, third year. Commercial geography, four periods per week, second year. Commercial law, two periods per week, fourth year. Economics, five periods per week, fourth year. Civics, two periods per week, third year.

MATHEMATICS.— Mathematics, four periods per week, first year, five periods per week, second year. Algebra (elective), five periods per week, fourth year. Plane geometry (elective), five periods per week, third year. Advanced arithmetic (elective), five periods per week, fourth year.

BUSINESS TECHNIQUE.— Penmanship, five periods per week, first half of first year. Business knowledge and practice, five periods per week, second half of first year. Bookkeeping, five periods per week, second year. Bookkeeping (elective), five periods per week, third and fourth years. Advanced bookkeeping (elective), ten periods per week, fourth year. Typewriting, one period per week, second, third and fourth years, and in the stenography classes. Stenography and typewriting (elective), nine periods per week, third year and ten periods per week, fourth year.

SCIENCE.— Elementary physics, five periods per week, three-fifths of first year. Hygiene, five periods per week, two-fifths of first year. Chemistry, five periods per week, third year. Applied chemistry (elective), five periods per week, fourth year. Applied physics (elective), five periods per week, fourth year.

MERCHANDISING.—(Elective).— Five periods per week, fourth year.

DRAWING.— Commercial design, one period per week, second year (elective), three periods per week, third and fourth years.

CHORAL PRACTICE.— One period per week, first year.

LECTURES.— One period per week, first, second, third and fourth years.

FOREIGN TRADE.— (Elective).— Five periods per week, fourth year.

GLEE CLUB.— (Elective).— One period per week, first, second, third and fourth years.

ORCHESTRA.— (Elective).— One period per week, first, second, third and fourth years.

MILITARY DRILL.— Two periods per week, first, second, third and fourth years.

NAVIGATION.— (Elective).— Five periods per week, fourth year.

SCHOOL DOCUMENT NO. 9—1919
BOSTON PUBLIC SCHOOLS

A LIST OF BOOKS
FOR HOME READING

PREPARED FOR PUPILS IN LATIN AND DAY HIGH
SCHOOLS AND INTERMEDIATE SCHOOLS AND CLASSES



CITY OF BOSTON
PRINTING DEPARTMENT
1920

This list of Books for Home Reading is a revision of the list prepared by the High School Council in English in 1913, and published as School Document No. 2, 1913.

Adopted.

Attest:

IN SCHOOL COMMITTEE, June 16, 1919.

THORNTON D. APOLLONIO,
Secretary.

Reprint authorized.

Attest:

IN SCHOOL COMMITTEE, June 28, 1920.

ELLEN M. CRONIN,
Secretary pro tempore.

INTRODUCTION.

This list of books was prepared by a committee of the High School Council in English as an aid to the pupils of the Latin and the day high schools in their selection of desirable books for home reading in connection with the study of English in the schools. The committee consisted of Miss Elizabeth M. Richardson, Chairman, Girls' High School; Miss Clara B. Shaw, High School of Practical Arts, and Miss Abby M. Thompson, Charlestown High School. The books are listed in the alphabetical order of the names of their authors. The Roman numerals in the first column indicate the year of the courses in which the reading of these books should be particularly helpful. The letters given in the third column refer to the following titles of subjects:

A. Art.	M. Mathematics.
B. Biography and Narrative of Personal Experience.	My. Myths, Legends, Hero-cycles, Folk Lore, Fairy Tales, etc.
C. B. Commercial Branches.	P. Poetry.
D. Drama.	S. Science.
E. Essays and Miscellaneous Prose.	T. Travel.
F. Fiction.	Tr. Ancient Languages in Transla- tion.
H. History.	W. War.
L. Letters.	

FRANK V. THOMPSON,
Superintendent of Public Schools.

A.

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| IV. | Aaronsohn, Alexander. | W. | With the Turks in Palestine. |
| IV. | Abbey, Edwin Austin, Jr. | W. | The Letters of an American Soldier. |
| I., II.
I., II. | Abbot, Eleanor H. | F. | Molly Make-Believe. |
| | | F. | Little Eve Edgarton. |
| II., III. | Abbot, Jacob. | B. | Stories of Great Men. |
| I. | Adams, William E. | F. | Squire, Page, and Knight. |
| IV. | Addams, Jane. | B. | Twenty Years at Hull House. |
| IV. | Addison, Julia De W. | A. | The Boston Museum of Fine Arts. |
| IV. | Æschylus. | D. | Prometheus Bound. |
| I. | Ainger, Alfred. | B. | Charles Lamb. |
| II., III.
II., III.
II., III. | Ainsworth, William H. | F. | Boscobal or the Royal Oak. |
| | | F. | Lancashire Witches. |
| | | F. | Tower of London. |
| I.
I.
I.
I.
I. | Alcott, Louisa M. | F. | Jack and Jill. |
| | | F. | Little Men. |
| | | F. | Little Women. |
| | | F. | An Old-fashioned Girl. |
| | | F. | Under the Lilacs. |
| | | | (And Others.) |
| II., III.
II., III.
II., III.
II., III. | Aldrich, Mildred. | W. | A Hill Top on the Marne. |
| | | W. | On the Edge of the War Zone. |
| | | W. | The Peak of the Load. |
| | | F. | Told in a French Garden. |
| I., II.
II., III., IV.
II.
II., III.
II.
I.
IV. | Aldrich, Thomas Bailey. | F. | Marjorie Daw, and Other People. |
| | | P. | Poems. |
| | | F. | Prudence. |
| | | F. | The Queen of Sheba. |
| | | F. | The Stillwater Tragedy. |
| | | F. | The Story of a Bad Boy. |
| | | D. | A Set of Turquoise. |
| III. | Allen, Alexander V. G. | B. | Life and Letters of Phillips Brooks. |
| IV. | Allen, Grant. | T. | Belgium and Its Cities. |
| III., IV.
III. | Allen, James Lane. | F. | Flute and Violin. |
| | | F. | A Kentucky Cardinal. |

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| II., III. | Andrews, Mary R. S. | F. | The Courage of the Commonplace. |
| III., IV. | | F. | The Eternal Masculine. |
| III. | | F. | The Perfect Tribute. |
| II., III. | | W. | The Three Things. |
| II., III. | Antin, Mary. | B. | The Promised Land. |
| I. | | F. | Arabian Nights. |
| I., III. | Aquilar, Grace. | F. | The Days of Bruce. |
| IV. | Archer, William. | W. | Gems (?) of German Thought. |
| III., IV. | Arnold, Edwin. | F. | Wonderful Adventures of Phra, the Phœnician. |
| II. | Arnold, Matthew. | P. | Sohrab and Rustum. |
| III., IV. | | P. | Poetical Works. |
| III., IV. | | E. | Essays in Criticism. |
| II., III. | Atherton, Gertrude. | F. | The Conqueror. |
| II., III. | Atkinson, Eleanor. | W. | "Poilu," a Dog of Roubaix. |
| III. | Auerbach, Berthold. | F. | On the Heights. |
| II. | Austen, Jane. | F. | Emma. |
| III. | | F. | Persuasion. |
| III. | | F. | Pride and Prejudice. |
| IV. | | F. | Sense and Sensibility.
(And Others.) |
| II. | Austin, Jane G. | F. | Betty Alden. |
| I. | | F. | Dr. LeBaron and his Daughters. |
| II. | | F. | A Nameless Nobleman. |
| II. | | F. | Standish of Standish. |
| IV. | Ayscough, John (pseud.).
(Mgr. John Bickerstaffe-Drew.) | W. | French Windows. |

B.

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|-----------|-----------------------------|-----|-----------------------------------|
| I. | Bacheller, Irving. | F. | Eben Holden. |
| I. | Bacon, Edwin Munroe. | H. | The Boys' Hakluyt. |
| I. | | A. | Pictures Every Child Should Know. |
| IV. | Bacon, Francis. | E. | Essays. |
| III., IV. | Bacon, Josephine D. Daskam. | F. | Smith College Stories. |
| III., IV. | | F. | Memoirs of a Baby. |
| I. | Baldwin, James | My. | The Story of Roland. |
| | | My. | The Story of Siegfried. |
| | | My. | Old Greek Stories. |

I.	Ball, Walter W. R.	M.	A Short History of Mathematics.
		M.	Mathematical Recreations.
IV.	Bancroft, Elizabeth D.	L.	Letters from England.
I.	Bangs, John Kendrick.	F.	The House Boat on the Styx.
III.	Banks, Nancy R.	F.	Oldfield.
IV.	Barker, Granville, and Haus- man, Lawrence.	D.	Prunella.
III., IV.	Barlow, Jane.	F.	Irish Idylls.
III., IV.		F.	Strangers at Lisconnell.
I.	Barr, Amelia E.	F.	Bernicia.
I.		F.	The Bow of Orange Ribbon.
I.		F.	Friend Olivia.
I.		F.	The Maid of Maiden Lane.
III.	Barrie, James M.	F.	Auld Licht Idylls.
IV.		D.	Echoes of the War.
IV.		F.	The Little Minister.
IV.		D.	Half Hours.
II., III., IV.		F.	Little White Bird.
II.		B.	Margaret Ogilvy.
IV.		F.	Sentimental Tommy.
IV.		F.	A Window in Thrums.
II.	"Bartimaeus."	W.	The Long Trick (Stories of the British Navy).
III., IV.	Batchelder, Ernest A.	A.	Design in Theory and Practice.
II., III.	Bates, Katherine Lee.	P.	Ballad Book.
II., III.		T.	Spanish Highways and Byways.
IV.		D.	The English Religious Drama.
III., IV.	Beach, Rex.	F.	The Silver Horde.
III., IV.		F.	The Barrier.
III., IV.		F.	The Iron Trail.
IV.	Beck, James M.	W.	The War and Humanity.
IV.	Beith, Capt. Ian Hay.	W.	Getting Together.
I., II., III., IV.		W.	All In It: K 1 Carries On.
I., II., III., IV.		W.	The First Hundred Thousand.
III., IV.	Bell, F. McKelvey.	W.	The First Canadians in France.
IV.	Bennett, Arnold.	F.	Buried Alive.
IV.		E.	How to Live on Twenty-four Hours a Day.
IV.		E.	The Human Machine.
IV.		D.	Milestones.
IV.		F.	A Great Man.
IV.		F.	Leonora.
IV.		F.	The Truth About an Author.
IV.		T.	Your United States.

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| II. | Bennett, John. | F. | Barnaby Lee. |
| I. | | F. | Master Skylark. |
| III. | | F. | The Treasure of Pere Gaillard. |
| III., IV. | Benson, Arthur C. | E. | From a College Window. |
| III., IV. | | E. | The Upton Letters. |
| IV. | Benson, Edward F. | F. | David Blaize. |
| III. | Besant, Walter. | F. | Armored of Lyonesse. |
| IV. | | F. | All Sorts and Conditions of Men. |
| III. | | F. | For Faith and Freedom. |
| I., II., III. | | B. | Story of King Alfred. |
| IV. | Birmingham, George A. (pseud.). | F. | Lalage's Lovers. |
| III. | (Hannay, James Owen.) | F. | Priscilla's Comedy. |
| | Bishop, Major William A. | W. | Winged Warfare. |
| IV. | Bisland, Elizabeth. | B. | Life and Letters of Lafcadio Hearn. |
| IV. | Bjornson, Bjornstjerne. | D. | The Gauntlet. |
| III., IV. | Black, Alexander. | A. | Photography Indoor and Out. |
| II., III. | Black, William. | F. | In Far Lochaber. |
| III., IV. | | F. | Judith Shakespeare. |
| III., IV. | | F. | A Princess of Thule. |
| II., III. | | F. | Strange Adventures. |
| III. | | F. | White Wings. |
| II., III. | Blackmore, Richard D. | F. | Lorna Doone. |
| II., III. | Bolles, Frank. | P. | Chocorma's Tenants. |
| II., III. | | E. | Land of the Lingering Snow. |
| I., II. | Bolton, Sarah K. | B. | Lives of Girls Who Became Famous. |
| I., II. | | B. | Lives of Poor Boys Who Became Famous. |
| III., IV. | Bond, Alexander R. | S. | With the Men Who Do Things. |
| III., IV. | Bordeaux, Henri. | W. | Guynemer, Knight of the Air. |
| IV. | Borrow, George H. | F. | Romany Rye. |
| I. | Bostock, Frank C. | M. | The Training of Wild Animals. |
| IV. | Boswell, James. | B. | Life of Doctor Johnson. |
| | Bott, Capt. Alan. | W. | The Cavalry of the Clouds. |
| I. | Bouve, Pauline C. | H. | American Heroes and Heroines. |
| I., II. | Brady, Cyrus Townsend. | F. | For the Freedom of the Sea. |
| IV. | Briggs, Lebaron Russell. | E. | Routine and Ideals. |
| IV. | | E. | School, College and Character. |

IV.	Brigham, Albert P.	S.	Geographic Influences in American History.
III., IV.	Bronte, Charlotte.	F.	Jane Eyre.
III., IV.		F.	Shirley.
I.	Brooks, Elbridge S.	H.	Historic Boys.
I.		H.	Historic Girls.
I.		H.	Chivalric Days.
I.	Brooks, Phillips.	L.	Letters of Travel.
III., IV.	Broun, Heywood.	W.	The A. E. F.— With General Pershing and His American Forces.
II.	Brown, Alice,	F.	The Country Road.
IV.		E.	By Oak and Thorn.
II.		E.	Meadow Grass.
III.		F.	Tiverton Tales.
IV.		D.	Children of Earth.
I.	Brown, John.	B.	Marjorie Fleming.
I.		E.	Our Dogs.
I.		F.	Rab and His Friends.
III.	Browning, H. Ellen.	T.	A Girl's Wanderings in Hungary.
III., IV.	Bryant, William Cullen.	P.	The Iliad.
III., IV.		P.	The Odyssey.
IV.	Bryce, James.	T.	South America: Observations and Impressions.
IV.		H.	The American Commonwealth.
IV.	Buchan, John.	W.	Nelson's History of the War.
I., II.	Bullen, Frank T.	F.	The Cruise of the Cachalot.
	Bulwer-Lytton, Edward, Lord. (See Lytton.)		
III., IV.	Bunner, Henry Cyler.	F.	Love in Old Clothes and Other Stories.
II., IV.		F.	Short Sixes.
I., II.	Bunyan, John.	F.	Pilgrim's Progress.
III.	Burkett, Charles W.	C. B.	Cotton.
I.	Burnett, Frances Hodgson.	F.	Little Lord Fauntleroy.
I.		F.	The Little Lost Prince.
III., IV.		B.	The One I Knew the Best of All.
I.		F.	The Secret Garden.
IV.		F.	The Shuttle.
III., IV.		F.	T. Tembaron.
III., IV.		F.	Through One Administration.
III., IV.	Burns, Elmer E.	S.	The Story of Great Inventions.

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| I. | Burrell, Caroline B. | E. | Saturday Mornings. |
| I. | Burroughs, John. | E. | Bird and Bough. |
| II. | | E. | Far and Near. |
| II. | | B. | John James Audubon. |
| IV. | | E. | Locusts and Wild Honey. |
| III., IV. | | E. | Pepacton. |
| III. | | E. | Wake Robin. |
| III. | | E. | Camping and Tramping with Roosevelt |
| II., III., IV. | Buswell, Leslie. | W. | Ambulance No. 10. |
| III., IV. | Butcher, Samuel H., and
Lang, Andrew. | Tr. | Odyssey. |
| IV. | Bynner, Edwin L. | F. | Agnes Surriage. |
| IV. | | F. | The Begum's Daughter. |
| IV. | Bynner, Witter. | D. | The Little King. |
| I., II., III., IV. | Cable, Boyd. | C. | |
| II. | Cable, George W. | W. | Action Front. |
| III. | | F. | Bonaventure. |
| III. | | F. | The Grandissimes. |
| III. | | F. | In Kincaid's Battery. |
| III. | | F. | John March, Southerner. |
| III. | | F. | Old Creole Days. |
| III., IV. | Caffin, Charles H. | A. | How to Study Pictures. |
| III., IV. | | A. | An Outline History of Sculpture. |
| III., IV. | | A. | The Story of American Sculpture. |
| III., IV. | | A. | The Story of American Painting. |
| III., IV. | | A. | The Story of Spanish Painting. |
| IV. | Calkins and Holden. | C. B. | Modern Advertising. |
| IV. | Cameron, Margaret (pseud.).
(Lewis, Mrs. H. C.) | D. | Comedies in Miniature. |
| IV. | Canfield, Dorothea F.
(Dorothea Canfield Fisher.) | W. | Home Fires in France. |
| I., II. | | F. | Understood Betsy. |
| IV. | | F. | The Bent Twig. |
| III., IV. | Carlyle, Thomas. | H. | The French Revolution. |
| III., IV. | Carpenter, Frank G. | C. B. | Geographical Readers. |
| III. | Carpenter, Frank O. | C. B. | Foods and Their Uses. |
| I. | Carroll, Lewis (pseud.).
(Dodgson, Charles L.) | F. | Alice's Adventures in Wonderland. |
| I. | | F. | Alice Through the Looking Glass. |
| III. | Caskoden, Edwin (pseud.).
(Major, Charles.) | F. | When Knighthood Was in Flower. |

III.	Castle, Agnes and Edgerton.	F.	The Pride of Jennico.
I.	Catherwood, Mary H.	F.	Old Kaskaskia.
I.		F.	The Romance of Dollard.
I., III.	Catlin, George.	B.	My Life Among the Indians.
I., II.	Cervantes, Saavedra Miguel de.	F.	Don Quixote.
III., IV.	Champney, Elizabeth.	F.	Romance of the Bourbon Chateaux.
II.	Chapin, Anna A.	My.	The Story of the Rhinegold.
III., IV.	Chaplin, Heman V.	F.	Five Hundred Dollars and Other New England Stories.
II.	Charles, Elizabeth R.	F.	The Draytons and Davenants.
II.		F.	Chronicle of the Schonberg-Cott Family.
II.		H.	Joan the Maid.
II.		F.	On Both Sides of the Sea.
I., II.	Cheney, Mrs. Ednah D.	B.	Louisa May Alcott.
III., IV.	Chestnutt, Charles W.	F.	The Wife of his Youth and Other Stories.
III., IV.	Childers, Erskine.	W.	The Riddle of the Sands.
II.	Chittenden, Lucius C.	B.	Recollections of President Lincoln.
III., IV.	Cholmondeley, Mary.	F.	Red Pottage.
I.	Church, Alfred J.	My.	Æneid for Boys and Girls.
I.		My.	Heroes of Chivalry and Romance.
I.		H.	Heroes and Kings.
I.		H.	Lords of the World.
I.		H.	Pictures from Roman Life and Story.
I.		My.	Story of the Iliad.
I.		My.	Story of the Odyssey.
I.		H.	Roman Life in Days of Cicero.
III.	Churchill, Winston.	F.	Coniston.
III., IV.		F.	The Crisis.
III., IV.		F.	The Crossing.
III.		F.	Mr. Crew's Career.
III.		F.	Richard Carvel.
III., IV.	Clark, C.	W.	To Bagdad with the British.
III., IV.	Clark, Charles Edgar.	B.	My Fifty Years in the Navy.
I.	Clarke, Helen A.	E.	Longfellow's Country.
IV.	Cleghorn, Sarah N.	F.	The Spinster.
	Clemens, Samuel L. (See Twain, Mark.)		

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| III., IV. | Clement, Clara E. | A. | An Outline History of Architecture. |
| III., IV. | Cleveland, Albert. | C. B. | Funds and Their Uses. |
| III., IV. | Cochrane, Charles H. | C. B. | Modern Industrial Progress. |
| I. | Coffin, Charles C. | H. | Building the Nation. |
| I. | | H. | Boys of '61. |
| I. | | H. | Boys of '76. |
| I. | | H. | Daughters of the Revolution. |
| I. | | H. | Following the Flag. |
| I. | | H. | Old Times in the Colonies. |
| I. | | F. | Winning His Way. |
| III., IV. | Collins, Wilkie. | F. | The Moonstone. |
| III., IV. | | F. | The Woman in White. |
| I. | Colson, Elizabeth, and Chittendon, Anna G. | L. | Children's Letters. |
| II., III. | Connolly, James. | F. | Head Winds. |
| II., III. | | F. | Out of Gloucester. |
| II., III. | | W. | The U-Boat Hunters. |
| II. | Connor, Ralph (pseud.).
(Gordon, Charles W.) | F. | Black Rock. |
| II. | | F. | The Doctor. |
| II. | | F. | The Man from Glengarry. |
| II. | | F. | The Prospector. |
| II. | | F. | The Sky Pilot. |
| IV. | Converse, Florence. | F. | Long Will. |
| I. | Coolidge, Susan. | F. | Clover. |
| I. | | F. | In the High Valley. |
| I. | | F. | What Katy Did. |
| I. | | F. | What Katy Did at School. |
| I., II. | Cooper, James Fenimore. | F. | The Deerslayer. |
| I., II. | | F. | The Last of the Mohicans. |
| I., II. | | F. | Lionel Lincoln. |
| I., II. | | F. | The Pathfinder. |
| I., II. | | F. | The Pilot. |
| I., II. | | F. | The Pioneers. |
| I., II. | | F. | The Prairie. |
| I., II. | | F. | The Sky. |
| III., IV. | Cornford, Leslie Cope. | H. | The Great Deeds of the Black Watch. |
| | | W. | Merchant Seamen in War. |
| III., IV. | Craddock, Charles E. (pseud.).
(Murfre, Mary N.) | F. | Down the Ravine. |
| III., IV. | | F. | In the Tennessee Mountains. |
| III., IV. | | F. | The Prophet of the Great Smoky Mountains. |
| II. | Craik, Dinah Mulock. | F. | A Brave Lady. |
| II., III. | | F. | John Halifax, Gentleman. |
| II. | | F. | A Life for a Life. |
| III. | | F. | A Noble Life. |

IV.	Cram, Ralph Adams.	A.	The Ruined Abbeys of Great Britain.
III., IV.	Crawford, F. Marion.	F.	Arethusa.
II., III.		F.	Marietta.
II., III.		F.	In the Palace of the King.
III., IV.		F.	Saracinesca.
III., IV.		F.	Sant' Ilario. (Sequel to Saracinesca.)
III., IV.		F.	Don Orsino. (Sequel to Sant' Ilario.)
III., IV.		F.	Pietro Ghisleri. (Sequel to Don Orsino.)
III.	Crockett, Samuel R.	F.	The Silver Skull.
III.		F.	Sweetheart Travellers.
I.		F.	The Raiders.
IV.	Cross, Anson K.	A.	Light and Shade.
IV.	Crothers, Samuel McChord.	E.	Among Friends.
IV.		E.	By the Christmas Fire.
IV.		E.	The Gentle Reader.
IV.		E.	Humanly Speaking.
IV.		E.	The Pardoner's Wallet.
IV.		E.	The Understanding Heart.
II., III.	Crow, Martha Foote.	B.	The Life of Harriet Beecher Stowe.
I.	Cummins, Maria S.	F.	The Lamplighter.
III., IV.	Curtin, D. Thomas.	W.	The Land of the Deepening Shadow.
III., IV.	Curtis, George William.	E.	Potiphar Papers.
III., IV.		E.	Prue and I.
III., IV.		E.	Trumps.
III., IV.		T.	Nile Notes of a Howadji.
II.	Custer, Elizabeth.	E.	Boots and Saddles.
I.	Cutler, U. Waldo.	My.	Stories of King Arthur and His Knights.
III., IV.	Cutting, Mary Stuart.	F.	Little Stories of Married Life.
D.			
I.	Dana, Richard H.	T.	Two Years Before the Mast.
III., IV.	Daniell, Fred S.	A.	Furnishings of a Modest House.
IV.	Dante.	P.	The Divine Comedy. (Translated by C. E. Norton or H. W. Longfellow.)
IV.	D'Arblay, Mme. (Fanny Burney).	B.	Diary and Letters.
IV.		F.	Evelina.
IV.	Davis, Rebecca Harding.	F.	Doctor Warrick's Daughters.
IV.		F.	Silhouettes of American Life.

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| II., III. | Davis, Richard Harding. | F. | The Bar Sinister. |
| II., III. | | F. | Gallagher and Other Stories. |
| II. | | F. | In the Fog. |
| II., III. | | F. | Soldiers of Fortune. |
| II., III. | | F. | Van Bibber and Others. |
| III. | | F. | The West from a Car Window. |
| III. | Davis, William Stearns. | F. | Belshazzar. |
| II. | | F. | A Friend of Cæsar. |
| I. | | F. | God Wills It. |
| IV. | | F. | A Victor of Salamis. |
| II., III. | Dawson, Coningsby. | W. | Carry On. |
| IV. | | W. | The Glory of the Trenches. |
| IV. | | W. | Out to Win. |
| I. | DeFoe, Daniel. | F. | Robinson Crusoe. |
| IV. | Deland, Margaret. | F. | The Awakening of Helena Ritchie. |
| III. | | F. | Dr. Lavendar's People. |
| IV. | | E. | The Common Way. |
| IV. | | F. | The Iron Woman. |
| III. | | F. | Old Chester Tales. |
| I., II. | Demetrios, George. | B. | When I Was a Boy in Greece. |
| III., IV. | Deming, Philander. | F. | Adirondack Stories. |
| III., IV. | | F. | Tompkins and Other Folks. |
| III., IV. | DeMorgan, William. | F. | Alice-for-Short. |
| III., IV. | | F. | Joseph Vance. |
| IV. | | F. | Somehow Good. |
| III., IV. | Derr, Norman. | W. | Mademoiselle Miss. |
| III. | Dickens, Charles. | F. | Barnaby Rudge. |
| I. | | F. | Boots at the Holly Tree Inn (in Christmas Books). |
| I. | | F. | Christmas Carol. |
| III. | | F. | David Copperfield. |
| II. | | F. | Dombey and Son. |
| II. | | F. | Nicholas Nickleby. |
| II. | | F. | Old Curiosity Shop. |
| I. | | F. | Oliver Twist. |
| III. | | F. | Our Mutual Friend. |
| III. | | F. | Pickwick Papers. |
| II. | | F. | Tale of Two Cities. |
| IV. | Dickinson, T. H. (Editor). | D. | Chief Contemporary Dramatists. |
| I., II. | Dix, Beulah M.
(Mrs. George H. Flebbe). | F. | Hugh Gwyeth. |
| I. | | F. | Fair Maid of Gravestones. |
| I. | | F. | Soldier Rigdale. |
| I. | | F. | The Making of Christopher Ferringham. |
| IV. | | D. | The Road to Yesterday. |
| IV. | | D. | The Rose of Plymouth Town. |
| III., IV. | Dixon, W. Mae Neile. | W. | The British Navy at War. |

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| I. | Dodge, Mary Mapes. | F. | Donald and Dorothy. |
| I. | | F. | Hans Brinker or the Silver Skates. |
| III. | Dole, Nathan Haskell. | A. | A Score of Famous Composers. |
| III., IV. | Dooley, William H. | C. B. | Textiles. |
| | | C. B. | Book on Leather. |
| I., II. | Doubleday, Russell. | F. | Cattle Ranch to College. |
| | | S. | Stories of Inventors. |
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| I. | Lord, Mrs. Frewen. | A. | Tales from Canterbury Cathedral. |
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| II. | Lorimer, George H. | L. | Letters of a Self-Made Merchant to His Son. |
| II., III. | Lossing, Benson John | H. | Story of the United States Navy for Boys. |
| II. | | H. | The Two Spies, Nathan Hale and John André. |
| I. | Lothrop, Harriet M. | F. | A Little Maid of Concord Town. |
| III. | Loti, Pierre (pseud.).
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| IV. | Lowell, James Russell. | E. | A Garden Acquaintance. |
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| IV. | | E. | My Study Windows. |
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| III. | Lytton, Edward George. | F. | Harold, the Last of the Saxon Kings. |
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| III. | | F. | The Last Days of Pompeii. |
| M. | | | |
| IV. | Maartens, Maarten (pseud.).
(Joost M. Van der Poorter-Schwartz.) | F. | The Greater Victory. |
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| IV. | Mabie, Hamilton Wright. | E. | Essays on Books and Culture. |
| | | E. | Essays on Nature and Culture. |
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| IV. | Macaulay, Thomas B. | E. | Essays. |
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I.	Macdonald, George.	F.	Sir Gibbie.
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III.		F.	The Marquis of Lossie.
III.		F.	Warlock o' Glenwarlock.
IV.	Mackaye, Percy.	D.	The Canterbury Pilgrims.
		D.	Jeanne d'Arc.
		D.	The Scarecrow.
III.	Maclaren, Ian (pseud.). (Watson, John.)	F.	Beside the Bonnie Briar Bush.
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IV.	Maeterlinck, Maurice.	D.	The Betrothal.
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IV.	Marlowe, Christopher.	D.	The Jew of Malta.
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| III., IV. | | F. | Pendennis. |
| IV. | | E. | Roundabout Papers. |
| III., IV. | | F. | The Newcomes. |
| IV. | | F. | The Virginians. |
| IV. | | F. | Vanity Fair. |

III., IV.	Thanet, Octave (pseud.) (French, Alice.)	F.	The Heart of Toil.
III., IV.		F.	The Missionary Sheriff.
III., IV.		F.	Otto the Knight.
III., IV.		F.	Stories of a Western Town.
IV.	Thomas, Augustus.	D.	As a Man Thinks.
IV.		D.	The Witching Hour.
I.	Thompson, Daniel P.	F.	Green Mountain Boys.
II.		F.	Locke, Amaden.
III.	Thompson, Maurice.	F.	Alice of Old Vincennes.
II.	Thoreau, Henry D.	E.	Cape Cod.
III.		E.	Maine Woods.
IV.		E.	Walden.
IV.	Thorndike, Ashley Horace.	E.	Shakespeare's Theatre.
III.	Thwing, Charles F.	L.	Letters from a Father to His Daughter Entering College.
IV.		L.	Letters from a Father to His Son Entering College.
I.	Tiffany, Nina M.	H.	From Colony to Commonwealth.
I.		H.	Pilgrims and Puritans.
IV.	Tinker, Chauncey Brewster.	B.	Dr. Johnson and Fanny Burney.
IV.	Tiplady, Thomas.	W.	The Cross at the Front.
I.	Tomlinson, Everett T.	B.	Florence Nightingale.
I.		F.	The Boy Soldier of 1812.
I.		F.	Three Colonial Boys.
II.	Torrey, Bradford.	E.	Birds in the Bush.
II.		T.	Footing It in Franconia.
IV.		E.	Nature's Invitation.
III.		E.	The Clerk of the Woods.
III.		E.	The Rambler's Lease.
I.	Towle, George M.	T.	Marco Polo.
III., IV.	Trent, William P.	B.	Robert E. Lee.
III., IV.		B.	Southern Statesmen of the Old Régime
III., IV.	Trollope, Anthony.	F.	Barchester Towers.
III., IV.		F.	Castle Richmond.
III., IV.		F.	Framley Parsonage.
		F.	The American Senator.
		F.	The Claverings.
III., IV.		H.	The Life of Cicero.
III., IV.		F.	The Prime Minister.
III., IV.		F.	The Way We Live Now.
I.	Trowbridge, John T.	F.	Cudjo's Cave.
		F.	Neighbor Jackwood.

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| III. | Tully, Eleanor Gates. | B. | The Diary of a Prairie Girl. |
| IV. | Turczynowich, Laura. | W. | Then the Prussians Came to Poland. |
| IV. | Turgenev, Ivan S. | F. | Liza. |
| I, II. | Twain, Mark (pseud.).
(Clemens, Samuel L.) | F. | Adventures of Tom Sawyer. |
| I., II. | | F. | Innocents Abroad. |
| I., II. | | F. | Personal Recollections of Joan of Arc. |
| I., II. | | F. | The Prince and the Pauper. |
| I., II. | | F. | The Tragedy of Pudd'n Head Wilson. |
| U. | | | |
| IV. | Udall, Sir Nicholas. | D. | Ralph Roister Doister. |
| IV. | Urbino, Lavinia B. | A. | The Princess of Art. |
| V. | | | |
| III., IV.
I., II. | Vachell, Horace Annesley. | F. | John Verney. |
| | | F. | The Hill. |
| IV. | Vallery, Radot, Marie René. | B. | Life of Pasteur. |
| III., IV.
II. | Van Dyke, Henry. | W. | Fighting for Peace. |
| II., III. | | E. | Fisherman's Luck. |
| II., III. | | E. | Little Rivers. |
| III., IV. | | E. | Historic Scenes in Fiction. |
| III., IV. | | T. | Out of Doors in the Holy Land. |
| II., III. | | F. | The Blue Flower. |
| IV. | | F. | The Ruling Passion. |
| | | D. | The House of Rimmon. |
| IV. | Verhaeren, Emile, | W. | Belgium's Agony. |
| III. | Vernes, Jules. | F. | Around the World in Eighty Days. |
| III. | | F. | Michael Strogoff. |
| III. | | F. | The Mysterious Island. |
| III. | | F. | Twenty Thousand Leagues Under the Sea. |
| W. | | | |
| III.
III., IV. | Waddington, Mary A. K. | L. | Italian Letters of a Diplomat's Wife. |
| | | L. | Letters of a Diplomat's Wife. |
| II. | Wallace, Lew. | F. | Ben Hur. |
| II. | | F. | The Fair God. |
| II. | | F. | The Prince of India. |
| II. | | F. | The Prince of the House of David. |
| II. | Waller, Mary Ella. | F. | Through the Gates of the Netherlands. |
| II. | | F. | Wood Carver of "Lymphy." |
| IV. | Walpole, Hugh. | W. | The Dark Forest. |

IV.	Walton, Isaac.	E.	Complete Angler.
III., IV. III., IV.	Ward, Elizabeth.	F.	Doctor Zay.
		F.	The Singular Life.
IV. III., IV. IV. IV.	Ward, Mrs. Humphry.	W.	England's Effort.
		F.	Marcella.
		F.	Robert Elsmere.
		W.	Toward the Goal.
I., II.	Ware, Rev. William.	F.	Zenobia.
III. II. II. I.	Warner, Charles Dudley.	E.	Back-Log Studies.
		B.	Being a Boy.
		F.	The Golden House.
		E.	A Hunting of the Deer, etc.
		E.	In the Wilderness.
II. III.		T.	A Little Journey in the World.
		E.	The People for Whom Shakespeare Wrote.
III. II.		T.	A Roundabout Journey.
		E.	My Summer in a Garden.
I., II.	Washington, Booker T.	B.	Up From Slavery.
I.	Weare, George E.	H.	Cabot's Discovery of North America.
III, IV.	Weaver, Eli Wittwer.	M.	Profitable Vocations for Girls.
I. I. I.	Webster, Jean.	F.	Daddy Long Legs.
		F.	Dear Enemy.
		F.	Much Ado About Peter.
II., III.	Weeks, Edwin Lord.	T.	From the Black Sea Through Persia and India.
IV.	Wells, Herbert George.	W.	Mr. Britling Sees It Through.
III.	Westcott, Edward.	F.	David Harum.
I. I. I. III.	Weyman, Stanley J.	F.	The Abbess of Vlage.
		F.	A Gentleman of France.
		F.	The House of the Wolf.
		F.	Under the Red Robe.
IV.	Wharton, Edith Newbold.	F.	The Hermit and the Wild Woman.
II., III., IV.	Wheeler, Benjamin Ide.	B.	Alexander the Great.
I. I.	Whitaker, Evelyn.	F.	Laddie.
		F.	Miss Toosey's Mission.
I.	Whitecomb, Selden Lincoln.	H.	Chronological Outline of American Literature.
III., IV.	White, Eliza Orne.	F.	A Browning Courtship and Other Stories.
III. III.	White, Stewart Edward.	F.	A Certain Man.
		F.	The Blazed Trail.

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| II. | White, Stewart Edward. | F. | The Conjuror's House. |
| III. | | E. | The Forest. |
| III. | | F. | The Silent Places. |
| III. | | E. | On Making Camp. |
| IV. | White, William Allen. | W. | The Martial Adventures of Henry and Me. |
| III., IV. | Whiting, Lillian. | T. | Paris, the Beautiful. |
| IV. | Whitlock, Brand. | W. | Belgium. |
| I., II. | Whitney, Mrs. Adeline Dutton. | F. | Faith Gartney's Girlhood. |
| I. | | F. | The Gayworthys. |
| I. | | F. | Real Folks. |
| I. | | F. | The Other Girls. |
| I. | | F. | We Girls. |
| I. | | F. | A Summer in Leslie Goldthwaite's Life. |
| I. | Wiggin, Kate Douglas. | F. | The Birds' Christmas Carol. |
| III. | | F. | A Cathedral Courtship. |
| I. | | F. | Mother Carey's Chickens. |
| II. | | F. | Penelope's English Experiences. |
| II. | | F. | Penelope's Irish Experience. |
| II. | | F. | Penelope's Progress. |
| I. | | F. | Polly Oliver's Problem. |
| I. | | F. | Rebecca of Sunny Brook Farm. |
| I. | | F. | Romance of a Christmas Card. |
| II. | | F. | Rose o' the River. |
| I. | | F. | Story of Patsy. |
| I. | | F. | Timothy's Quest. |
| IV. | Wilde, Oscar. | F. | The Canterville Ghost. |
| IV. | | D. | Ideal Husband. |
| IV. | | D. | The Importance of Being Earnest. |
| IV. | Wilde, Perceval. | D. | Unseen Host and Other Plays. |
| II. | Wilkins, Mary E. | F. | A Humble Romance. |
| II. | | F. | A New England Nun. |
| II. | | F. | The Shoulders of Atlas. |
| I. | | D. | Giles Corey. |
| III., IV. | Willets, Gilson. | C. B. | Workers of the Nation. |
| II., III. | Williams, Archibald. | S. | How It is Done. |
| II., III. | | S. | How It is Made. |
| II., III. | | S. | How It Works. |
| I., II. | Williams, Hesse Lynch. | F. | Princeton Stories. |
| I., II. | | F. | Adventures of a Freshman. |
| III. | Williams, Sherman. | B. | Some Successful Americans. |
| III., IV. | Williams, Theodore C. | Tr. | The Æneid of Virgil. |
| I. | Williston, Teresa Peirce. | My. | Japanese Fairy Tales. |
| III. | Willsie, Mrs. Honora McCue. | F. | Still Jim. |

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| I. | Wilson, Woodrow. | B. | George Washington. |
| I., II. | Winslow, Anna Green. | B. | Diary of a Boston School Girl of 1771. |
| I., II. | | H. | Home Life in Colonial Days. |
| IV. | Winter, William. | T. | Gray Days and Gold. |
| III. | | T. | Shakespeare's England. |
| IV. | | B. | Life and Art of Joseph Jefferson. |
| III., IV. | Winthrop, Theodore. | F. | John Brent. |
| III., IV. | | F. | Cecil Dreeme. |
| III. | Wise, John S. | H. | The End of an Era. |
| IV. | Wister, Owen. | W. | The Pentecost of Calamity. |
| III. | | F. | "Phil. 4." |
| III., IV. | | F. | Red Men and White. |
| IV. | | B. | U. S. Grant. |
| III. | | F. | The Virginian. |
| III., IV. | Wood, Eric Fisher. | W. | The Note Book of an Attaché. |
| III., IV. | Woodhull, John F. | C. B. | Electricity and Its Use in Everyday Life. |
| III., IV. | Woolson, Constance Fennimore. | F. | Castle Nowhere and Other Stories. |
| III., IV. | | F. | Rodman the Keeper. |
| III., IV. | Wright, Mabel C. | F. | Garden of a Commuter's Wife. |
| II. | Wyatt, Edith. | F. | Every One His Own Way. |
| III. | Wyckoff, Walter A. | F. | The Workers. |
| Y. | | | |
| IV. | Yeats, William B. | D. | The Land of Heart's Desire. |
| IV. | | D. | The Pot of Broth. |
| IV. | | D. | Cathleen Ni Hoolihan and Other Plays. |
| II. | Yonge, Charlotte M. | F. | The Caged Lion. |
| II. | | F. | The Chaplet of Pearls. |
| II. | | F. | The Dove in the Eagle's Nest. |
| I. | | F. | Heir of Redcliffe. |
| III. | | H. | Heroes of the Nations. |
| I. | | F. | Kenneth. |
| II. | | F. | The Lances of Linwood. |
| I. | | F. | The Little Duke. |
| I. | | F. | Little Jarvis. |
| II. | | F. | The Pigeon Pie. |
| II. | | H. | The Stories of the Nations. |
| Z. | | | |
| IV. | Zangwill, Israel. | F. | The Children of the Ghetto. |
| IV. | | F. | Ghetto Comedies. |
| IV. | | D. | The Melting Pot. |

SCHOOL DOCUMENT NO. 10—1919
BOSTON PUBLIC SCHOOLS
OUTLINE OF MINIMUM REQUIREMENTS IN
LATIN FOR INTERMEDIATE CLASSES,
GRADE IX



BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, BOSTON, June 16, 1919.

Ordered, That one thousand (1,000) copies of the outline of minimum requirements in Latin for intermediate classes, Grade IX., be printed as a school document.

Attest:

THORNTON D. APOLLONIO,
Secretary.

OUTLINE OF MINIMUM REQUIREMENTS IN LATIN FOR INTERMEDIATE CLASSES, GRADE IX.

This outline of work has been prepared by a Council comprising a committee from the teachers of Latin in the various high schools of the city, together with the teachers of Latin in the intermediate classes.

The members of this Council are as follows:

PERKINS, ALBERT S., <i>Chairman</i>	Dorchester High School.
FOLEY, MARY J., <i>Secretary</i>	Girls' Latin School.
ADAMS, LOUISE	East Boston High School.
BARR, MARGARET D.	Chapman School.
CLARK, LAURA S.	Dorchester High School.
CROWLEY, JAMES A.	Emerson School.
GARDNER, HENRY R.	Public Latin School.
HOUGHTON, LEROY K.	Robert G. Shaw School.
KENNEDY, FRANK A.	Girls' High School.
LALLY, JOHN J.	Mary Hemenway School.
LYNCH, JOSEPH E.	Abraham Lincoln School.
MURPHY, FREDERICK J.	Ulysses S. Grant School.
O'NEIL, JOSEPH A. F.	John Winthrop School.
PEARCE, ANGELA M.	Oliver W. Holmes School.
SCHUBARTH, KATHERINE M.	Lewis School.
SMITH, MARJORIE	George Putnam School.
TRASK, CAROLINE W.	West Roxbury High School.

MINIMUM REQUIREMENTS IN LATIN.

- I. Forms, Vocabulary, Syntax, Translation of Latin into English, and of English into Latin shall receive, each of them, special and separate emphasis.
- II. The Forms shall include:
 - (a) the declension of *domina, dea, filia; dominus, Vergilius, filius, pilum, praesidium, puer, ager, vir, deus; princeps, miles, lapis, rex, index, virtus, consul, legio, ordo, pater, flumen, tempus, opus, caput, caedes, hostis, urbs, cliens, insigne; animal, calcar; vis, iter; adventus, cornu, domus; dies, res; bonus, pulcher, liber; alius, unus, etc.; acer, celer, omnis, par, amans, iens, altior, plus; duo, tres, mille; ego, tu, sui; ipse, iste, hic, ille, is, idem; qui* the relative, *quis (qui)* the interrogative, *quis (qui)* the indefinite, *aliquis (aliqui), quisquam, quisque, quidam.*
 - (b) the comparison of *altus, liber, pulcher, audax, brevis, acer, celer; bonus, malus, magnus, multus, parvus, senex, iuvenis, vetus; facilis, etc.; exterus, inferus, posterus, superus; citerior, interior, prior, propior, ulterior; care, pulchre, misere, acriter, celeriter, audacter, facile; diu, bene, male, magnopere, multum, parum, saepe.*
 - (c) the conjugation of *amo, moneo, rego, audio, capio; hortor, vereor, sequor, petior; sum, possum, prosum; volo, nolo, malo; fero, eo, fio;*
or, the declension, comparison, and conjugation of equivalent words.
- III. The Vocabulary shall include about six hundred (600) words, based chiefly on the vocabulary of Caesar.
 - (a) In committing words to memory, simple derivation from-English words, French words, other Latin words, etc., shall be utilized.
- IV. The Syntax shall include:
 - (A) The four cases of agreement in their simplest forms; and the rules for tense sequence.
 - (B) The following noun constructions:
 1. Nominate Case:
 - (a) Subject of a finite verb.
 2. Genitive Case:
 - (a) Possession.
 - (b) Partitive.
 - (c) General description.
 3. Dative Case:
 - (a) Indirect object.
 - (b) With special adjectives.
 - (c) Possessor.
 - (d) Service.

- (e) With intransitive verbs.
 - (f) With compound verbs.
 - (g) Apparent agent.
 - (h) Interest.
 - 4. Accusative Case:
 - (a) Direct object.
 - (b) Place whither.
 - (c) Duration of time.
 - (d) Extent of space.
 - (e) Subject of an infinitive.
 - (f) Secondary object.
 - (g) With preposition.
 - 5. Ablative Case:
 - (a) Means of instrument.
 - (b) Agent.
 - (c) Manner.
 - (d) Accompaniment.
 - (e) Time when or within which.
 - (f) Place where.
 - (g) Place whence.
 - (h) Specification.
 - (i) Cause.
 - (j) Degree of difference.
 - (k) General description.
 - (l) Comparison.
 - (m) With *utor*, *fruo*, *fungor*, *potior*, *vescor*.
 - (n) Absolute.
 - (o) With prepositions.
 - 6. Vocative Case:
 - (a) Person addressed.
 - 7. Locative Case:
 - (a) Place where.
- (C) The following verb constructions:
- 1. Indicative Mood:
 - (a) Simple statements.
 - (b) Simple question.
 - (c) Causal clause with *quod*.
 - (d) Temporal clause with *postquam* or *ubi*.
 - (e) Simple relative clause.
 - 2. Subjunctive Mood:
 - (a) Purpose with *ut*, *ne*, *qui*, *quo*.
 - (b) Result with *ut*, or *ut non*.
 - (c) Indirect question.
 - (d) Temporal clause with *cum*.
 - (e) Causal clause with *cum*.
 - (f) Concessive clause with *cum*.
 - (g) Substantive clause of purpose.
 - (h) Substantive clause of result.
 - (i) Substantive clause with verb of fearing.
 - (j) Subordinate clause in indirect discourse.

3. Imperative Mood:
 - (a) Command.
4. Infinitive Mood:
 - (a) Indirect statement.
 - (b) Complementary.
 - (c) Substantive, as subject or object.
5. Participial Mood:
 - (a) Absolute.
 - (b) First periphrastic conjugation.
 - (c) Second periphrastic conjugation.
 - (d) Gerundive construction.
6. Gerund Construction:
7. Supine:
 - (a) Purpose.
 - (b) Specification.
- V. The translation of Latin into English shall include:
 - (a) Reading aloud, involving an accurate knowledge of pronunciation and of accent.
 - (b) Elementary instruction in word order.
 - (c) Translation of detached sentences, and also of connected reading matter such as is to be found in most first-year Latin books or in *Fabulæ Faciles*.
 - (d) Prepared work and unprepared work.
 - (e) Written work and oral work.
- VI. The translation of English into Latin shall include:
 - (a) Translation of short, detached sentences only.
 - (b) Prepared work and unprepared work.
 - (c) Written work and oral work.
- VII. Methods of teaching the subjects shall be left to the initiative of the various teachers.
- VIII. The nomenclature used in these recommendations shall be adhered to, at least as far as may be possible.
- IX. Home lessons shall be assigned for at least five of the eight periods each week.

NOTE.— This outline of work is based upon the present requirements in the first year of the high school, consisting of five periods of prepared lessons per week.

SCHOOL DOCUMENT NO. 11-1919
BOSTON PUBLIC SCHOOLS

SPECIAL SYLLABUS DRAWING
AND MANUAL TRAINING

GRADES I., II., III.



1919-1920

IN SCHOOL COMMITTEE, June 16, 1919.

Adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

SUPPLIES.

Furnished in September on the basis of principals' reports for which blanks are issued in March. The amounts delivered plus any surpluses reported should equal quotas stated.

If supplies are not received by date given, inquiry should be made of the master or assistant in charge. If it is found that they have not arrived in the district, inquiry should be made of the Supply Department. The quotas following have been carefully and generously revised, and, if supplies are distributed and used as indicated, there should be no necessity for further requisitions except in the cases where numbers prove larger than estimates or reports last sent in.

GRADES I., II., III.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, Manila, 6-inch by 9-inch, Grade I.....	100 sheets per pupil.
Drawing paper, Manila, 9-inch by 12-inch, Grades II. and III.....	100 sheets per pupil.
Drawing paper, gray, 6-inch by 9-inch, Grade I.....	100 sheets per pupil.
Drawing paper, gray, 9-inch by 12-inch, Grades II. and III.....	125 sheets per pupil.
Drawing paper, white, 6-inch by 9-inch, Grades I. and II.....	10 sheets per pupil.
Drawing paper, white, 9-inch by 12-inch, Grade III.....	12 sheets per pupil.
Cross section paper, 9-inch by 12-inch.....	4 sheets per pupil.
Gray construction paper, 9-inch by 12-inch, Grades II. and III.....	2 packages to each class.
Gray folding paper, 6-inch by 6-inch, Grade I.....	12 sheets per pupil.
Envelopes, 8-inch by 11-inch, Grade I.....	1 per pupil.
Envelopes, 10-inch by 13-inch, Grades II. and III.....	1 per pupil.
Box colored crayons, Grades I., II. and III.....	1 per pupil.
Pencils, E. Faber's No. 310-HB, Grades I., II. and III.....	1 per pupil.
Pasteboard rules, Grades II. and III.....	1 per pupil.
Pressboard tablets, assorted shapes, Grades I. and II.....	1 set to 2 classes.
Colored circles and squares, 1-inch, Grades I. and II.....	30 to each pupil.
Colored pegs, Grades I. and II.....	2 packages to each building.
Tubes paste, Grade III.....	2 to each class.
Strips of colored paper, 1-inch by 2-inch, Grade III.....	19 to each pupil.
Strips of colored paper, 2-inch by 4-inch, Grade III.....	13 to each pupil.

Scissors.—($4\frac{1}{2}$ -inch.) One pair to two pupils. (To be used in sets, each set shared by two classes.)

DRAWING. GRADES I., II., III.

DESIGN.

Aim.

To have the children see and feel the difference between Order and Disorder, and appreciate the value and importance of Order; to develop the Love of Order and, so far as possible, the Sense of Beauty.

The beautiful is simply the best of its kind — the supreme instance which gives the standard. To recognize and discover it is one of the chief interests of a civilized life.

Subjects to be Considered.

- A. The impressions of Vision; of light, of color, of positions, directions, measures, proportions and shapes.
- B. The forms of Order as observed in Nature and in works of Art.
- A. The Impressions of Vision.

First discriminations:

- I. Tones: Different effects of Light and Color.
 - a. Differences of Color: Red, Orange, Yellow, Green, Blue and Violet.
 - b. Differences of Value in Colors: Colors light and colors dark; colors in different quantities of light.
- II. Positions:

Recognition of different positions in the Field of Vision, the principal position being the center of the Field of Vision.
- III. Directions:

Recognition of differences of direction in the Field of Vision: The Vertical (Up and Down); the Horizontal (Right and Left); and the intermediate diagonal directions.
- IV. Measures:

Recognition of different measures (large and small), of different sizes, distances and intervals, as observed in the Field of Vision; the diameter of the Field being the principal measure to which the others may be referred.
- V. Proportions:

The square gives the best standard of reference for Proportion, the height and width of the square being equal. We have in different rectangles the simplest expression of Proportion.

VI. Shapes:

Recognition of differences of shape: Square, oblong, round, oval, etc.

The definition of all these differences (visual discriminations) by free-hand exercises in drawing and coloring; the exercises being carefully graded; the first being very simple and easy, preparing the pupil for those which follow, which should be increasingly difficult.

B. Order as observed in Nature and in Works of Art.

The three forms or modes of Order:

1. Continuations, Recurrences or Repetitions.
2. Progressions or Sequences: Different forms of motion.
3. Balances: Different forms of equilibrium or rest. To be appreciated, all balances must be set on the central vertical of the Field of Vision.

These three forms of Order occur in combinations, producing a great variety of phenomena, more or less interesting.

- a. Recurrences and Repetitions in Progressions and Sequences.
- b. Recurrences and Repetitions in Balances.
- c. Sequences in forms of Balance, and Balances in Sequences.
- d. Alterations in Sequences; that is, differences repeated, producing the effect of Rhythm.
- e. Gradations of differences set in Sequences or Progressions.
- f. The Balance of Repetitions and Inversions.
- g. The Balance of different elements which, though they do not correspond in character, are equivalent in their force of appeal in the Sense of Vision.

The Definition and Description of Order in particular instances and examples:

This is to be done in a carefully graded series of exercises in drawing and coloring. The first exercise should be very simple and elementary, the later ones increasingly difficult; from lesson to lesson and from grade to grade. By degrees the whole field of Design should be revealed, and its possibilities, in some measure, realized; beginning with the orders of plane geometry, ending in the representation of Nature and Life in different geometric systems. As we have time systems in Music and in Poetry so we have space systems in Design. Order, Symmetry and Harmony are in all cases the expression of mathematical laws.

It is very important that the children should see good examples of design; in drawings and paintings, in textiles, in pottery and porcelain, in wood or stone carvings and in metal work. Drawings and paintings, photographs and enlargements of photographs and prints may be used and the children should from time to time be taken to the Natural History Museums and to the Museums of Art. On these occasions they should be encouraged to take notes of what they see that they believe to be beautiful. Tracing designs that interest them with a finger in the air they will often be able to draw it on paper afterwards, making the same movements with the point of the pencil. They will not remember the design but the action describing it.

Materials Used in the Primary Grades.

In the beginning tablets, seeds and colored sticks should be used.

When it comes to drawing and coloring, lead pencils and colored crayons will serve the purpose.

Habits.

Correct habits of sitting are essential to the child's health and sight.

The position used in writing is not good for drawing. The paper should be at the reading distance from the eye and so placed that the top and bottom edges appear horizontal and the sides vertical. So far as possible the paper should be at right angles with the direction of vision; not foreshortened.

REPRESENTATION.

Aim.

To develop visual discrimination, memory and imagination, together with an ability to describe visual experience and to express visual knowledge and ideas.

Subjects to be Considered and Represented.

Subjects: Familiar objects; people and things as observed in every day life; more particularly objects which are of interest to children and of which they are likely to have some visual knowledge; men; women; boys; girls; babies; winter clothes; summer clothes; dwelling houses, large and small; public buildings; the State House, the City Hall; the Court House; the railway station; the streets of the city; the roads of the country; railroads; engines and trains of cars; automobiles; motor trucks; carriages; wagons; and carts with horses; people riding on horses; soldiers, on foot and on horseback; soldiers with gun carriages and guns; the Public Gardens; trees of different

kinds; different fruits; different vegetables; different kinds of flowers; different actions, the various actions and work of men; the work which men do; the work that women do; the actions and activities of children; children playing games; incidents of daily life so far as they are suitable for pictorial representation.

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As time goes on this list can be extended and be made at once comprehensive and specific; covering the *genera*, *species* and *varieties* of objects and coming down towards the ultimate discriminations in which the best examples, the best of every kind of thing is discovered: discovered through Science and described by Art.

Mode of Expression.

Drawing in definite outlines and coloring in flat tones. There is to be no modeling of solid forms either in Black-and-White or in Color. The interest is to be in the Shapes of objects, people and things, and in the differences of color revealed in light.

Materials.

The drawing will be done with lead pencils; the coloring, at first with colored crayons, afterwards, in the more advanced grades, with water colors.

Method of Teaching.

The teachers' part in this, as in all educational work, is to make the pupils think clearly and express themselves well. In this particular course the thinking must be in the terms of vision: Light, color, positions, directions, distances or measures, proportions and shapes. The knowledge and ideas to be expressed by drawing and coloring are in tone-relations and in space-relations. The terms of expression are lines and spots of color. The aim is to induce the pupils to think of Nature and Life in lines and spots of color and to put these lines and spots on paper; just as in other courses of study they think in words and forms of language, using the words in speech and in writing. The knowledge and ideas which are developed and expressed by lines and spots of color are hardly less important than those which are expressed by language. Many ideas which we try to express by speech and by writing can be much better expressed more definitely and more clearly by drawing and painting.

It will be the duty of the teachers in this course to suggest the subjects to be thought about and described; to help the pupils in the comparison, criticism and judgment of their own performances; and, finally, to grade the work done according to the standard

to be maintained. The teacher is expected to take a genuine interest in the work of the pupils and to be quick to recognize and appreciate what is good in the work done; what is better, and what is best.

In suggesting subjects to be thought about and described by the pupils the teacher must be very specific and particular. For example, the teacher says, "A man is going out of the door when he remembers that his wife has not told him what to get for dinner. He turns round and calls her. She comes to the door with a little girl, four years old. They stand by the door talking. The little girl is interested in the cat which, seeing a dog across the street, has its fur raised and its back up. The house is built of red bricks. There are stone steps and the door and its jambs are painted white." By these words fairly definite images are suggested and the pupils may proceed to draw and to color the subject, each one following his own imagination and producing his own picture. Taking up any one of the pictures produced it is a question whether it is true as a representation. In what respects is it true? What mistakes, if any, have been made? What changes or corrections should be made? Has anything been left out that is natural and proper to the picture as a whole, or to the people and things represented in it? In other words, is the performance appropriate to the idea which suggested it? Because in Art nothing counts that is unnatural, untimely or inappropriate. When the pictures have been considered and criticised, one after another, they should be put up to be considered together, with a view to making a comparison and selecting the best — the best of all or the best two or three. The children must be encouraged to make comparisons and to pass judgments. The teacher should assist them and encourage them, declaring her own judgment at the end of the lesson.

As to the standard to be maintained: It should be determined always by the best work produced in the grade; the better the work the higher the standard. With this idea in mind, the best work should be selected and kept for reference; and it will be well to have exhibitions of it from time to time. As the work improves, as it should from year to year, insignificant and unimportant examples may be thrown out. It is always the best that gives the standard. It is proper that the pupils should see what the standard is and for that reason exhibitions are held. No copying should be allowed. When the children have seen the exhibition

it should be taken down, and they should then proceed, as before, to think for themselves and to express, each one, his own knowledge and his own ideas.

In the work of the nine grades there should be a steady increase of visual knowledge and of the power of expression which goes along with it. The crude representations of the primary grades must pass away and in the work of the higher grades we must see more and more truth of representation and the representation must be more and more specific and particular. If in the work of the primary grades we recognize the genus, we must presently recognize the species, then the varieties of each species. Last of all we reach the representation of particular people and particular things. Whenever the child is unable to think of anything to draw, that means that he has no visual knowledge appropriate to the subject proposed. He must proceed, at once, to get the required knowledge. A simple way of doing this is to have the child look in Nature for the subject-matter to be represented; to get an idea of it. A good way of doing this is for the child to trace the objects, people or things in the air with the point of his finger. When he has done that he will remember, not the object, but his own action in describing it, and he will probably be able to do with the point of his pencil what he had done with the point of his finger, or something like that.

If the subject of the next lesson is given out before the children leave the room, they will be looking out for the people and things they will have to draw. The younger children can trace what they see with the finger and then draw it. The older children may be able to draw directly from the object, if it is in any sense still life. In most cases, however, our visual knowledge is best secured by quick observation, followed by clear recollection or vivid imagination. Still life is a very small part of Life and the art of drawing and painting in representation must not be limited to it, as it has been, very generally, during the past fifty years. In any case we should be able to imagine and draw the human figure in its principal attitudes and actions before we undertake anything like specific portraiture. The general idea, which is always a thing of the imagination, should take precedence over any specifications of it in the direction of matter-of-fact or statistical portraiture. We should be able to draw and paint men, women and children, and the objects connected with them, as the old masters did, before we proceed to direct imitation or copying. When the child reaches the end of the ninth grade of this teach-

ing which we propose, and has come up to the standard required, he ought to be well prepared to take up the practice of drawing and painting in a professional school; particularly if he had done well in the practice of Design which has been going on at the same time. The motive of Representation, to achieve the truth of Representation, is not sufficient in itself; nor is the motive of Design self-sufficient, Design being the arrangement and composition of lines and spots of color to illustrate the mathematical principles of Order. The two motives must come together and work together; the ultimate aim being to present the Truth of Representation in forms which will be at least orderly and, so far as possible, beautiful.

It is very important that the children of all grades should see a great many photographs and pictures. By means of photographs and pictures their visual experience and knowledge may be indefinitely increased, particularly if they make drawings from the photographs that interest them and from the pictures that please them. The photographs should represent facts and scenes of Nature and Life. Photographic reproductions of drawings and paintings by good masters should also be used. The half-tone pictures which appear in the daily and weekly papers and magazines will be of interest and serve the purpose in many ways. Photographs and pictures should be used as books are used, and referred to for information as books are referred to. In drawing from the photographs or pictures the children should do what they will naturally and inevitably do if left to themselves. They must follow the outlines of the subject with the eye and the eye with the point of the pencil. In that way they will feel the sizes and the shapes together and draw them together; otherwise the drawing will be a matter of visual triangulation and construction, which is all right when the object is to arrange and state facts or ideas, but it is not the way to get visual knowledge and the power of imagination. We must have knowledge and ideas to express before we proceed to the Art of Arrangement and Composition.

DRAWING. GRADE I.

Note.—There are one hundred and eight exercises in this series to be followed in consecutive order. Time allotment: Minimum, seventy-five minutes; suggested, one hundred minutes; maximum, one hundred twenty-five minutes.

SEPTEMBER. DESIGN.

1. Teach the children to recognize and distinguish the circle. Let them try to make circles by laying seeds, lentils or pegs, or by cutting or drawing.
2. Find circles in nature and in works of art.

Note 1.—References to Nature and to Works of Art.

Shapes found in nature are approximately like but are rarely perfect geometric shapes. The term "art" in these primary exercises refers to things made by man; always things beautiful if possible. The aim of these references is to lead children to recognize nature's wonderful system of order and to note a similar system in works of art.

Although when possible the pupils should see the thing itself, the greater part of these references must be confined necessarily to illustrations and photographs, some of which will be supplied from time to time. A great abundance of material may be found in books already in use and much that is valuable may be collected by teachers and children from newspapers, magazines, and the many periodicals dealing with life and its associations in country and town. Such collected material may be mounted and kept in portfolio form for constant use.

3. An Exercise in **Repetition: Circles.**

Arrange circles at regular intervals, (a) single, (b) grouped, (c) near together, (d) far apart, in a horizontal or vertical row.

Note 2.—In the following exercises in repetition in a row both horizontal and vertical arrangements should be made. These exercises may correlate with busy work in number study, *e. g.*, a row of twos, a row of threes.

4. Teach the children to recognize and distinguish **Standard Yellow.**
5. Fill in a 3-inch circle with standard yellow crayon.

6. Find bright yellow in nature and in works of art.

Note 3.—The series of lessons referring to nature and art are observation and conversation exercises and may readily correlate with language in the use of complete statements: "The daisy is round like a circle"; "My canary's eye is round like a circle"; "I saw a yellow butterfly"; "Some apples are red"; or "I have a red cart"; "There is red in those rugs." If possible, when each new thought is presented show the pupils examples, either by means of photographs or the things themselves, referring both to nature and to works of art.

7. An Exercise in **Color Repetition: Yellow.**

Repeat Yellow with pegs, tablets, etc., in a row at regular intervals, making several different arrangements.

8. An Exercise in **Measure.**

Teach terms large and small, long and short.

9. An Exercise in **Repetition with Alternation of Size: Circles.**

Repeat circles in a row with alternation of size, large and small, using tablets and other available material, lentils, seeds, split peas, etc.

10. An Exercise in **Balance: Circles.**

(a) **Axial.**—Teach right and left balance on a vertical axis, using circles.

(b) **Central.**—Teach right and left balance on a vertical axis with balance on a center. Use five circles — one for center. Arrange five or more circles around a center.

REPRESENTATION.

Time.

There are forty-nine lessons in this course, allowing four lessons in January for lettering.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. Refer often to general note on Representation, pp. 6, 7, 8, 9, 10. There should be much encouragement and little or no criticism at first. Compare results at the end of each lesson to see if the pictures tell the truth. The subjects for pictures will naturally center around people and things as seen by the children in their daily experiences. Use black, white and colors to help tell the truth.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Describe types of people, rather than

special individuals. Avoid any attempt at portraiture. Real people and pictures may be studied for general facts of shape, proportion and color, but not for individual likenesses. Use descriptive adjectives like tall, thin, short, stout, old and bent, light or dark colored, bright or dull, warm or cool colored, etc. The teacher may get ideas from good illustrations, describing a picture to the children, but not showing it to them until they have made their pictures. No two pictures in the class should be alike, although inspired by the same suggestions. The whole class should work on the same subject, in order to compare results which are similar. Never compare unlike things.

Imaginative Drawing. (Five lessons.)

Draw pictures; try to be true to nature.

A tall man standing still with a cane in his hand.

A short woman standing still with a closed umbrella in her hand.

A little boy standing still with his hat in his hands.

A little girl in a pink dress, standing near her doll carriage.

A little girl in a light blue dress.

Note.

After each lesson invite the children to judge the drawings.

In directed observation proceed as in science to study several individuals or pictures to learn general characteristics, not individual peculiarities. For example, study several heads to discover that the head is an oval, not a circle, that the eyes are half way down in the oval, not near the top where children usually draw them.

OCTOBER. DESIGN.

11. An exercise in Sequences of Progression: Circles.

Arrange circles (*a*) in a row, (*b*) in a field, (*c*) in a circular area, increasing or decreasing in size or number in orderly progression.

12. Find examples of above sequences in nature and in works of art.

13. Teach the children to recognize Standard Orange.

14. Fill in a 3-inch circle with standard orange crayon.

15. Find bright orange in nature and in works of art.

16. Teach recognition of the Square.

17. Find the square in nature and in works of art. Lay or cut a square.

18. An Exercise in Sequences of Repetition of Squares.

Arrange squares in a horizontal or vertical row, at regular intervals, near together, far apart, single or grouped. Make many variations.

19. An exercise in **Color Repetition: Orange.**
 Arrange orange tablets, pegs, etc., in a row at regular intervals and balance four on a center. Make many variations.
Note.— See Exercises 3, 10, 18.
20. An Exercise in **Color Alternation: Yellow and Orange.**
 Repeat yellow and orange with **alternation** in a row and in a field (repetition of rows), using pegs, tablets, seeds, threads, etc.
Note 4.— These simple exercises in harmony building with color may be supplemented by correlation with other primary work, busy work, number work, manual training; in stringing beads, weaving mats, sewing-card exercises.
21. An Exercise in **Sequences of Alternation of Squares.**
 Repeat squares in a row at regular intervals with the following changes in **alternation**: (a) change in attitude, (b) change in shape, (c) change in size, (d) change in number.
22. An Exercise in **Balance: Squares.**
 - (a) **Axial.**— Arrange two or more squares in a right and left balance on a vertical axis.
 - (b) **Central.**— Balance four squares left and right on a vertical axis with balance on a center. Use five squares, one for the center.
23. An Exercise in **Sequences of Progression: Size, Number.**
 Arrange squares — small to large, large to small — (a) in a row, (b) in a field, (c) in a square area, increasing or decreasing in size or number in orderly progression or gradation.
24. Teach the children to recognize **Standard Red.**

REPRESENTATION.

Directed Observation. (Five lessons to practise drawing a man.)

Draw a man standing still with feet close together. Compare lengths of head, body, arms and legs.

Draw a human head. Study shape and color of head, placing of eyes, nose, mouth, hair and ears, in front view.

Draw a human head. Show by hair and hat that it is the head of a man.

Draw a figure of a man. Show coat, hat, trousers and shoes.

Draw a man. Study possible positions of hands doing various things like carrying, reaching, hands in pockets, etc.

MANUAL TRAINING.

Aim.

To organize activities induced by the play instinct.

To develop ability to follow directions.

Means.

Constructing simple objects by folding paper.

Minimum Requirements.

To construct twelve simple articles from paper.

To be able to fold accurately.

There are thirty-two lessons in this series, one twenty-minute lesson each week, beginning in October.

There are four twenty-minute lessons in this month.

Note.

Discuss and show finished model at the beginning of each lesson.

Paper Square. (Use block paper (6 x 9) and scissors.)

- (1) Place paper with one long edge parallel to front edge of the desk. (2) Hold paper down with left hand. (3) Carry the lower right corner upward until the right edge coincides with the top edge. Crease. (4) Cut off the rectangular piece of paper, leaving the 6-inch square. (5) Make two small squares of the remaining paper. Keep for next lesson.

Book. Window. Snow Plow. (Use paper squares made in last lesson.)

- a. (1) Place a square with one edge parallel to front edge of desk. (2) Carry right edge over to coincide with left edge. Crease. Result suggests a book when opened.
- b. (1) Place a square with one edge parallel to front edge of desk. (2) Fold and crease on both diameters. (3) Open. The result suggests a window.
- c. (1) Place a square with one edge parallel to front edge of desk. (2) Fit the lower right corner to the upper left corner. Crease. (3) Without opening fit the lower left corner to the upper right corner. Crease. (4) Open the last half way and stand model on edges of the square. The result is a snow plow.

NOVEMBER. DESIGN.

25. Fill in a 3-inch circle or square with standard red crayon.

26. Find bright red in nature and in works of art.

27. An Exercise in **Color Repetition: Red.**

Repeat red tablets, pegs, etc., in a row at regular intervals.

Balance on a center in four. (See Exercises 3, 10, 18, 22.)

(See Note 5.)

28. An Exercise in **Color Alternation: Orange and Red.**

Repeat orange and red with alternation in a row and in a field (repetition of rows), using tablets, pegs, etc. (See Note 4.)

29. Teach the children to recognize **Standard Violet**.
30. Fill in a 3-inch circle or square with standard violet crayon.
31. Find violet in nature and in works of art.
32. An Exercise in **Color Repetition: Violet**.
Repeat violet tablets, pegs, etc., in a row at regular intervals.
Balance four on a center. (See Exercises 3, 10, 18, 22.)
Note 5.— In making arrangements of tablets (circles and squares) four around a center, use five, one for the center.
33. An Exercise in **Color Alternation: Violet and Red**.
Repeat violet and red with alternation in a row and in a field (repetition of rows), using tablets, pegs, etc. (See Note 4.)
34. Teach the children to recognize **Standard Blue**.
35. Fill in a 3-inch circle or square with standard blue crayon.
36. Find bright blue in nature and in works of art.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures of daily experiences in the neighborhood in which a man is the principal figure. Choose and describe a dramatic moment.

A man fixing the street lights.

The letter carrier's visit.

A man putting out the ash barrels.

A man washing store windows with a long-handled brush.

MANUAL TRAINING.

Table. (Use block paper.)

- (1) Make a square and place it with one edge parallel to front edge of desk. (2) Fit lower edge to upper edge. Crease. (3) Open. (4) Fit lower edge to the center. Crease. (5) Turn model so top edge is at the bottom. (6) Fit this edge to the center. Crease. The result is a window with blinds. (7) Open half way and stand on long edges. Result is a table.

Stool. 16-Square Fold. (Use 6-inch paper squares furnished.)

- (1) Fold diameters of square. (2) Open. (3) Place square with one edge parallel to front edge of desk. (4) Fit the top and bottom edges of the square to the center. Crease. (5) Fit short edges to center. Crease. (6) Open the last folds half way and stand model on the desk. The result suggests a foot-stool. (7) Unfold. The result is sixteen small squares, or the 16-square fold.

Barn. (Use 6-inch paper squares furnished.)

- (1) Make the 16-square fold. (2) Open. (3) Fold on one diameter. (4) Place fold at top. (5) Fit upper right corner of small upper square to lower left corner of the same small square. Crease. (6) Open. (7) Fit right edge to center. (8) Turn half way back. (9) Separate two right edges. (10) Fold the upper portion back on the creases last made and flatten by creasing the diagonals of small squares. (11) Stand model on desk to make a barn.

DECEMBER. DESIGN.

37. An Exercise in **Color Repetition: Blue.**

Arrange blue tablets, pegs, etc., in a row at regular intervals. Balance four on a center. (See Exercises 3, 10, 18, 22.) (See Note 5.)

38. An Exercise in **Color Alternation: Blue and Violet.**

Repeat blue and violet with **alternation** in a row and in a field (repetition of rows), using tablets, pegs, etc. (See Note 4.)

39. Teach the children to recognize **Standard Green.**

40. Fill in a 3-inch circle or square with standard green crayon.

41. Find bright green in nature and in works of art.

42. An Exercise in **Repetition: Green.**

Repeat green tablets, pegs, etc., in a row at regular intervals. Balance four on a center. (See Exercises 3, 10, 18, 22.) (See Note 5.)

43. An Exercise in **Color Alternation: Green and Blue, Green and Yellow.**

Repeat with **alternation** green and blue, in a row and in a field. Make similar arrangements with green and yellow. Use tablets, pegs, etc. (See Note 4.)

44. Teach the children to recognize **values**, distinguishing **light and dark colors.**

Note 6.—By value is meant quantity of light. We use the terms "light" and "dark." Beginning with white, the highest degree of light, the gradual withdrawal of light will lead us through all degrees of gray to the darkest dark or black, the absence of light.

45. Find lights and darks in nature and in works of art.

46. An Exercise in recognition of **extreme dark: Black.**

REPRESENTATION.

Directed Observation. (Five lessons to practise drawing a woman.)

Draw a woman standing still with feet close together.

Compare lengths of head, arms, waist, skirt, etc.

Draw the head of a woman, full face view. Show the eyes, nose, ears and mouth. Color the face and hair.

Draw the head of a woman. Show how she wears a hat.

Draw the figure of a woman. Study shapes of waist, skirt, feet, etc., front view.

Draw a woman. Study possible positions of hands doing various things like carrying, fixing hat, buttoning coat, etc.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

House. (Use 6-inch paper squares furnished.)

- (1) Make barn. (2) Fold to make gable at opposite end. Result is a house.

Four-pointed Star. (Use 6-inch paper squares furnished and scissors.)

- (1) Fold a square on its diameters. (2) Open. (3) Fold one diagonal. (4) Open. (5) Fold on both diameters and leave folded. (6) Fold on the crease made for the diagonal. This makes a right angle triangle. (7) Draw a line from the center of the short folded edge to the opposite corner of the triangle. (8) Cut on this line. The result is a four-pointed star.

JANUARY. DESIGN.

47. Fill in a 3-inch circle or square with black crayon.
48. Find black or approximate black in nature and in works of art.
49. An Exercise in recognition of **extreme light: White.**
50. Cut out a 3-inch circle or a square from white paper. Mount on gray.
51. Find white or approximate white in nature and in works of art.
52. Teach the children to recognize the **oblong** and to distinguish it from other shapes.
53. Find oblong shapes in nature and in works of art.
54. An Exercise in **Repetition: Oblongs.**
 Arrange oblongs in a row at regular intervals, near together, far apart, single or grouped. (See Exercise 18.) Find oblongs in works of art.
55. An Exercise in **Sequences of Repetition with Alternation of Oblongs.**
 Repeat oblongs in a row at regular intervals with the following

changes in **alternation**: (a) change in attitude, (b) change in size, (c) change in number, (d) change in shape and proportion.

56. An Exercise in Balance: Oblongs.

(a) **Axial.**— Arrange two or more oblongs in right and left balance on a vertical axis.

(b) **Central.**— Arrange four oblongs in right and left balance on a vertical axis with balance on a center. Arrange eight oblongs balanced around a center.

57. An Exercise in Sequences of Progression: Oblongs.

Arrange oblongs — small to large, large to small — (a) in a row, (b) in an oblong area, (c) in a field, increasing or decreasing in size or number in orderly progression.

58. Teach recognition of Straight Line.

LETTERING.

Time.

There are four thirty-minute lessons in this course.

Lettering.

Learn to make the letters in the order of difficulty, beginning with the "I" group. (See letter charts.)

Practise lettering words. Keep letters close together.

Letter the name on the drawing envelope.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures of daily experiences in the neighborhood in which men, women, or children figure.

A man and woman carrying a heavy basket together.

A man digging a hole with a shovel.

A woman putting on her hat.

A man cleaning the sidewalk with the hose.

A woman washing windows with a cloth and pail of water.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

Settle. (Use 6-inch paper squares furnished.)

- (1) Make the 16-square fold. (2) Open. (3) Fold one diameter. (4) Place fold at the top. (5) Fold diagonals of upper right and upper left corner squares. (6) Open. (7) Raise the upper portion of the large square and bring together the lower left and lower right ends of these short diagonals to meet inside.

(8) Crease. (9) Stand model on the desk with fold at the top. (10) Fold the two ends forward to form sides. (11) Raise two lower front squares to form seat. Result is a settle.

Chair. (Use 6-inch paper squares furnished and scissors.)

- (1) Make the 16-square fold. (2) Open. (3) Cut off four right-hand squares. (4) Fold top to bottom edge. (5) Fold the diagonals of the two upper corner squares. (6) Open. (7) Fold, crossing diagonals inside, making the center one square wide. (8) Proceed as for bench. Result is a chair.

FEBRUARY. DESIGN.

59. Find "straight lines" in nature and in works of art.
60. Teach the children to recognize **vertical** lines and to distinguish **vertical** from other directions.
61. Find vertical directions in nature and in works of art.
62. An Exercise in **Repetition: Vertical lines.**
 Arrange vertical lines in a row at regular intervals, near together, far apart, single or grouped.
Note 7.— In these straight line exercises pupils may lay arrangements, using pegs, or make lines with colored crayon, or with match sticks and water-color or ink. For each exercise use one color only.
63. Find similar line repetition in nature and in works of art.
64. An Exercise in **Sequences of Progression: Vertical lines.**
 Arrange three or more vertical lines in a vertical row, short to long, narrow to wide.
 Arrange vertical lines of equal length in a field, in the increasing progression of 1—3—5—7.
65. Teach the children to recognize **horizontal lines** and to distinguish **horizontal** from other directions.
66. Find horizontal directions in nature and in works of art.
67. An Exercise in **Sequences of Repetition: Horizontal lines.**
 Arrange horizontal lines in a row at regular intervals, near together, far apart, single or grouped. (See note under vertical line repetition.)
 Find similar arrangements in nature and in works of art.

REPRESENTATION.

Directed Observation. (Five lessons to practise drawing a boy.)

Draw the head of a boy. Study shape and color of head, hair and features, in full front view.

Draw the head of a boy. Show his hat and how he wears it.

Draw the figure of a boy. Study proportion of head, body, legs and arms.

Draw a boy. Study possible positions of hands doing various things.

Draw a boy. Study simple changes of attitude in front view.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Valentine.

Make an original valentine, on the same principle as the book which is outlined in October.

Memory Work. (Use block paper.)

Make from memory some of the articles which have previously been folded.

MARCH. DESIGN.

68. An Exercise in Repetition with **Alternation** of vertical lines; of horizontal lines.

Repeat vertical lines in a row with the following changes in **alternation**: (a) change in attitude, (b) change in width, (c) change in length, (d) change in number.

Make similar arrangements, using horizontal lines.

Find similar arrangements in nature and in works of art.

69. An Exercise in **Sequences of Progression: Horizontal lines.**

Arrange three or more horizontal lines in a horizontal row, short to long and narrow to wide. Arrange horizontal lines long to short, short to long, in a field, parallel and at regular intervals.

70. Find similar sequences in nature and in works of art.

71. Teach the children to recognize oblique lines and to distinguish **oblique** from other directions.

72. Find oblique directions in nature and in works of art.

73. An Exercise in **Sequences of Repetition: Oblique lines.**

Arrange oblique lines in a row at regular intervals, near together, far apart, single or grouped. (See note under vertical line repetition.)

74. An Exercise in **Repetition with Alternation of Oblique lines.**

Repeat oblique lines in a row at regular intervals with the following changes in **alternation**: (a) change in attitude (left and right), touching, forming the zigzag movement, (b) change in width, (c) change in length, (d) change in number.

75. Find the zigzag movement in nature and in works of art. Find examples similar to other arrangements.
76. An Exercise in **Balance: Straight lines.**
 (a) **Axial.**— Arrange two or more vertical, horizontal or oblique lines in right and left balance on a vertical axis.
 (b) **Central.**— Arrange straight lines in “left and right balance” on a vertical axis with balance on a center, using four and multiples of four.
 Balance lines on a center in four and multiples of four; in three and multiples of three; in five and multiples of five. Find similar forms of balance in nature and in works of art.
77. Teach the children to recognize angles. Find angles in nature and in works of art.
78. Teach the children to recognize the **right-angle.**
79. An Exercise in **Repetition: Right-angles.**
 Arrange right-angles in a row at regular intervals.
80. An Exercise in **Repetition with Alternation of Right-angles.**
 Arrange right-angles in a row, touching, alternating a change in attitude to form a continuous movement. (See Greek fret.) Find similar examples in works of art.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures of daily experiences in the neighborhood in which children figure, *e. g.*:

Two boys playing with a ball.

A boy with a drum, leading a parade of two or three children, playing soldier.

A boy helping mother fill the wood box.

A boy helping father dig potatoes.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

Table Cloth. (Use 6-inch paper squares furnished.)

- (1) Fold the diagonals of the square. (2) Open. (3) Make the 16-square fold. (4) Open. (5) Bring the four corners to meet at the center of the square fold. (6) Open half way. (7) Invert model and stand it on the desk. The result suggests a table cloth.

Windmill. (Use 6-inch paper squares furnished.)

- (1) Make the table cloth. (2) Open. (3) Fold the center of each side to center of square, leaving corners standing erect.
- (4) Fold corner triangles down so that one projects on each side to form windmill.

APRIL. DESIGN.

81. An Exercise in **Balance: Right-angles.**

- (a) **Axial.**— Arrange right-angles in left and right balance in twos.
- (b) **Central.**— Arrange right-angles in left and right balance on a vertical axis with balance on a center, using four right-angles. Balance four right-angles, radiating from a center in regular order or repetition, forming the swastika.

Find similar examples in works of art.

82. Teach the children to recognize the **triangle** and to distinguish it from other shapes. Find the **triangle** in nature and in works of art.

83. Teach the children to recognize the **right-angle triangle** and to distinguish it from other triangles.

84. An Exercise in **Repetition: Right-angle Triangles.**

Arrange right-angle triangles at regular intervals in a row, near together, far apart, single or grouped.

85. An Exercise in **Repetition with Alternation of Right-angle Triangles.**

Repeat right-angle triangles in a row with the following changes in alternation: (a) change in attitude, (b) change in shape, (c) change in size, (d) change in number.

Find similar examples in nature and in works of art.

86. An Exercise in **Balance: Right-angle Triangles.**

- (a) **Axial.**— Arrange two right-angle triangles in right and left balance on a vertical axis.

Find similar balanced shapes in nature and in works of art.

- (b) **Central.**— Balance four right-angle triangles left and right on a vertical axis with balance on a center. Balance four or more right-angle triangles radiating from a center in regular order of repetition.

Find similar arrangements in nature and in works of art.

87. An Exercise in **Sequences of Progression: Right-angle Triangles.**

Arrange right-angle triangles (a) in a row, (b) in an area, (c) in a field, increasing or decreasing in number or size in orderly progression.

88. Teach the children to recognize the **Semicircle**.
Find similar shapes in nature and in works of art.
89. An Exercise in **Repetition: Semicircle**.
Arrange semicircles in a row at regular intervals, near together, far apart, single or grouped. Make many variations.
90. An Exercise in **Repetition with Alternation of Semicircles**.
Arrange semicircles in a row at regular intervals with the following changes in alternation: (a) change in attitude, (b) change in shape, (c) in size, (d) change in number.
91. An Exercise in **Balance: Semicircles**.
(a) **Axial**.— Arrange semicircles in left and right balance on a vertical axis.
(b) **Central**.— Balance four semicircles right and left on a vertical axis with balance on a center.
(c) Balance four semicircles radiating from a center in regular order of repetition.
Find similar forms of balance in nature and in works of art.

REPRESENTATION.

- Directed Observation.** (Five lessons to practise drawing a girl.)
Draw the head of a girl. Study shape and color, of head, hair and features in full front view.
Draw the head of a girl. Show her hat and how she wears it.
Draw the figure of a girl. Study proportion of head, body, legs and arms.
Draw a girl. Study possible positions of hands doing various things.
Draw a boy. Study simple changes of attitude in front view.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Double Boat. (Use 6-inch paper squares furnished.)

- (1) Make the windmill. (2) Reverse one arm on each side so that the two left corners come together and the two right corners come together. (3) Fold back on the horizontal diameter. Result is a double boat.

Sail Boat. (Use 6-inch squares furnished.)

- (1) Make the windmill. (2) Place on desk. (3) Turn one of the two nearer corners out to the side to form the body of the boat. (4) Bring the two other corners together at the top. (5) Leave the left-hand one in this position. (6) Turn the right-hand one back and down to coincide with the left side of the boat. The result is a sail boat.

MAY. DESIGN.

92. An Exercise in **Sequences of Progression: Semicircles.**
Arrange semicircles — small to large, large to small — (a) in a row, (b) in a semicircular area, (c) in a field, increasing or decreasing in size or number in orderly progression.
Find similar examples in nature and in works of art.
93. Teach the children to recognize **Curved lines.**
Find curved lines in nature and in works of art.
94. An Exercise in **Repetition: Simple Curves.**
Arrange simple curves in a row at regular intervals, near together and touching, making the "scallop." Use lentils, seeds, split peas, twine.
Find similar examples of curve repetition in nature and in works of art.
Note 8.— In all curved-line exercises pupils may lay lentils, split peas, bits of twine of equal length, or make lines with crayon or pencil.
95. An Exercise in **Repetition with Alternation of Simple Curves.**
Repeat simple curves in a row, with alternate change of attitude, producing the meander movement.
Find similar examples in nature and in works of art.
96. An Exercise in **Balance: Simple Curves.**
(a) **Axial.**— Arrange simple curves in right and left balance on a vertical axis.
Find similar balance arrangements in nature and in works of art.
(b) **Central.**— Arrange four simple curves in a left and right balance on a vertical axis with balance on a center. Balance four simple curves radiating from a center in regular order of repetition.
Find similar examples in nature and in works of art.
97. An Exercise in **Sequences of Progression: Simple Curves.**
Arrange simple curves in (a) a measure sequence, using two balanced curves and increasing the angle of divergence, small to large; (b) in a size sequence, small to large or large to small, in a row; (c) in a number sequence, three or five, diminish to one.
Find similar examples in nature and in works of art.
98. Review square.
Fold and cut a 6-inch square from 6 by 9 sheet of drawing paper.
99. An Exercise in **Repetition in a Field: Squares.**
Arrange sixteen 1-inch square tablets not quite touching in form of a square area.

Repeat the above exercise with colored tablets on a white background, using circles or squares. For each exercise use but one color.

Note 9.— These color repetition exercises in “all over” patterns may be of greater value if each row of pupils uses a different color, **pupils being allowed to see the effect in all six colors.**

100. An Exercise in Repetition: Squares.

Fold the 6-inch square previously cut to form sixteen small squares.

101. Exercises in Color Alternation. (In a square area.)

Repeat with alternation, using colored tablets, squares or circles, the following related colors: Orange and yellow, orange and red, green and blue, green and yellow, violet and red, violet and blue.

102. Teach the children to recognize Color Sequence in Related Colors, selecting the warm colors — yellow, orange, red.

Use tablets, pegs, crayons, etc.

103. Teach the children to recognize Color Sequence in Related Colors, selecting the cool colors — violet, blue, green.

Use tablets, pegs, crayons, etc.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures of daily experiences in the neighborhood, in which people are important. Describe any incident, *e. g.*:

A rainy, windy day. A woman and little girl are out with umbrellas. The little girl's umbrella blows inside out and the woman's hat blows off and flies away.

A big boy and his dog. The boy holds out a bit of bread and the dog sits up and begs for it.

Playing London-bridge. Two boys form an arch with their arms, while a little girl goes under.

Note.

Other subjects may be substituted for these, but the description should be clear enough to cause definite visual images. The more particular the description, the clearer the images will be.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

May Basket. (Use 6-inch paper squares furnished.)

(1) Fold diameters and diagonals of a square. (2) Open. (3)

Carry each corner to the center and fold. (4) Turn square over. (5) Fold the corners to the center and do not open. (6) Turn square over. (7) Insert fingers under each of four open squares and bring outside corners together. Result is a May basket.

General's Hat. (Use 6-inch paper squares furnished.)

- (1) Fold diameters and diagonals of a square. (2) Open. (3) Place square with one edge parallel to front edge of desk. (4) Bring the middle of the left and right edges to meet at the center of the lower edge. (5) Flatten upper portion by creasing along diagonals, forming a double triangle. (6) Place on the desk with the long edge of the triangle at the base. (7) Carry the right and left corners of the upper portion to the apex and fold. (8) Carry the right and left corners of the square thus formed to the center fold. The result is a general's hat.

JUNE.

104. An Exercise in **Repetition — Color Sequences Y. O. R., V. B. G.**
 Repeat the sequence Y. O. R. in a row at regular intervals.
 Repeat the sequence V. B. G. in a row at regular intervals.
 Use tablets, pegs, or crayons. Balance on a center, using pegs.
105. An Exercise in **Tone-Balance: Value.**
 Repetition with alternation of black and white.
 Divide by ruled lines, 1 inch apart, a 4-inch square into sixteen 1-inch squares. Fill in with black crayon every alternate square.
106. An Exercise in **Tone-Balance: Color.**
Repetition with Alternation of Complementary Colors.
 Repeat with alternation in a row and in a square area, warm and cold or complementary colors — red and green, violet and yellow, blue and orange. Use tablets, pegs, etc.
107. Exercises in **Tone-Balance: Intensity.**
 Repetition of bright and dull color.
 Repeat units at regular intervals in a row and in a field. These exercises are rhythmic in character, the class counting aloud in unison while drawing. The counting touches are made with the duller crayons, green, black or brown. A bright color touch is added afterwards without counting. The units may be composed of a combination of elements, and the counting "one-two," "one-two-three" or "one-two-three-four."

108. An Exercise in Tone-Balance and Tone-Sequence.

Arrange the six standard colors in related order in a row and in a circle to form the spectrum. Use crayons or tablets.

Find a similar color arrangement in nature. Prismatic colors. Rainbow.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Balloon. (Use 6-inch paper squares furnished.)

- (1) Make the general's hat. (2) Turn model over and repeat the same process on the under triangle. (3) Gently blow into the little hole formed by the meeting of the open edges. The result is a balloon.

Memory Work. (Use block paper.)

Make from memory some of the models which have been folded during the year.

DRAWING. GRADE II.

There are seventy-one exercises in this series to be followed in consecutive order.

Time allotment: Minimum, seventy-five minutes; suggested, ninety minutes; maximum, one hundred minutes.

SEPTEMBER. DESIGN.**Color.**

1. Review the **Six Standard Colors**, Red, Orange, Yellow, Green, Blue and Violet.

Arrange six 1-inch squares in a row or six 1-inch circles in the order of a circle, placing the circles in spectrum order. In the circle place yellow at the top.

2. An Exercise in **Sequences of Repetition.**

Select a shape and arrange at regular intervals in a row and in a field, (a) single, (b) grouped, (c) near together, (d) far apart. Make several variations.

Note 1.— For arrangements on the desks use pegs, tablets, seeds, etc. For drawing exercises use pencil, colored crayons, or match sticks with water-color or ink. In all "repetition in a row" exercises there should be vertical and horizontal and diagonal arrangements.

3. Find examples of **repetition** in nature and in works of art.

4 and 5. Exercises in Sequences of Alternation.

Select a shape and repeat **in a row** and **in a field** with the following changes in **alternation**: (a) change in attitude, (b) change in size, (c) change in shape, (d) change in number, (e) change in color, (f) change in value, black, white, (g) change in intensity, bright, dull. (See Note 1.)

6. Find examples of sequences of alternation in nature and in works of art.**7. An Exercise in Sequences of Progression.**

Select a shape and repeat in a row, in an area and in a field, small to large, large to small, increasing or decreasing in size or number in orderly progression. (See Note 1.)

Find examples of similar sequences in nature and in works of art.

LETTERING.**Time.**

There are four thirty-minute lessons in this course.

Lettering.

Learn to make the letters in the order of difficulty, beginning with the "I" group. (See letter charts.)

Practise lettering words. Keep letters close together.

Letter the name on the drawing envelope.

OCTOBER. DESIGN.**8 and 9. An Exercise in Balance.**

(a) **Axial.**—Arrange two or more motives of some chosen shape in right and left balance on a vertical axis.

(b) **Central.**—Select a shape and balance in fours, eights, sixteens, and in threes, sixes and twelves, on a vertical axis with balance on a center.

Select a shape and balance in threes, fours, sixes, sevens, etc., on a center. (See Note 1.)

10. An Exercise in Sequences of Repetition: Color.

Arrange colored tablets, circles or squares, at regular intervals in a row and in a square field. Repeat with each of the six standards, using colored pegs, seeds, papers, crayons or match sticks with color.

Note.—These simple exercises in harmony building with color may be supplemented by correlation with other primary work, busy work, number work, and manual training in stringing beads, weaving mats, and sewing-card exercises, etc.

11. Teach the children to recognize the Ellipse.

Find similar shapes in nature and in works of art.

12. An Exercise in Sequences of Repetition: Ellipses.

Arrange ellipses in a row at regular intervals, (a) single, (b) grouped, (c) near together or touching, (d) far apart. Make several variations, using tablets.

Find similar examples in nature and in works of art.

13. An Exercise in Sequences of Alternation: Ellipses.

Repeat ellipses in a row at regular intervals with the following changes in alternation: (a) change in attitude, (b) change in size, (c) change in number, (d) change in shape.

Find similar examples in nature and in works of art.

14. An Exercise in Balance.

(a) **Axial.**—Balance two ellipses right and left on a vertical axis.

Balance six ellipses right and left on a vertical axis.

Find similar arrangements in nature and in works of art.

(b) **Central.**—Balance four ellipses right and left on a vertical axis with balance on a center.

Balance ellipses on a center in threes and sixes, in fours and eights and in fives.

15. Find similar arrangements in nature and in works of art.**16. An Exercise in Sequences of Progression: Ellipses.**

Arrange ellipses in a row, in a field and in an elliptical area, increasing or decreasing in number or size in orderly progression.

Use lentils, seeds, tablets, etc. (See Note 1.)

Find similar arrangements in nature and in works of art.

REPRESENTATION.

Time.

There are forty-five thirty-minute lessons in this course.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. Refer often to the general note on Representation, pages 6, 7, 8, 9, 10. There should be much encouragement and little or no criticism at first. Compare results at the end of each lesson to see if the pictures tell the truth. The subjects for pictures naturally center around people and things as seen by the children in their daily experiences. Use black, white, and colors to help tell the truth.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Describe types of people rather than special individuals. Avoid any attempt at portraiture. Real

people and pictures may be studied for general facts of shape, proportion and color but not for individual likenesses. Use descriptive adjectives like tall, thin, short, stout, old and bent, light or dark colored, bright or dull, warm or cool colored, etc. The teacher may get ideas from good illustrations, describing a picture to the children, but not showing it to them until they have made their pictures. No two pictures in the class should be alike, although inspired by the same suggestions. The whole class should work on the same subject, in order to compare results which are similar. Never compare unlike things.

Imaginative Drawing. (Five lessons.)

Draw pictures, trying to be true to nature.

Paying the grocer.

Taking home the sugar.

At the market, buying a cabbage.

The marketman weighing the meat.

At home, helping with the work.

Note.

After each lesson invite the children to judge the drawings. In directed observation proceed as in science to study several individuals or pictures to learn general characteristics, not individual peculiarities. For example, study several heads to discover that the head is an oval, not a circle, that the eyes are half way down in the oval, not near the top where children usually draw them.

MANUAL TRAINING.

Aims.

To organize activities induced by the play instinct.

To develop ability to follow directions.

To develop the power of free expression.

Means.

Constructing simple familiar objects of paper.

Working from dictation and working independently.

Measuring and laying off distances in inches.

Ruling and cutting on straight lines.

Minimum Requirements.

Ten simple articles of paper.

Ability to measure and lay off inches.

Ability to cut on a straight line.

There are thirty-two lessons in this series, one twenty-minute lesson each week, beginning in October.

There are four twenty-minute lessons in this month.

Learn name and use of rule. Learn 1-inch space. Practise measuring books, papers, splints, etc. Learn that distance is a space which may be marked off by dots. Lay off distances on ruled lines. Use 9-inch by 12-inch gray paper furnished for manual training.

Discuss and show finished model at the beginning of each lesson. Save all pieces of paper left from each lesson which may be used for other models. Teach economy.

Rectangle.

- (1) Place paper with long edge at the top. (2) Lay off 3 inches from the left side on the upper and lower edges of paper. (3) Draw a line connecting these dots. (4) Cut on this line. This forms a 3-inch by 9-inch rectangle. (5) Cut three more 3-inch by 9-inch rectangles in the same manner. Keep these for the next lesson.

Double Rectangle.

Note.

All work in this grade is based on the double rectangle.

- (1) Place two strips made in the last lesson with long edges at the top. (2) On each strip draw two lines parallel to left edge and respectively 3 and 6 inches from it. (3) Fold on these lines so that one end overlaps the other. (4) Open one piece and tuck ends of this into the opposite openings of the other piece to lock the square. Cut a little from the sides of the last square so that it will tuck in easily. This forms a 3-inch double rectangle. Make another one from memory.

NOVEMBER. DESIGN.

17. An Exercise in Sequences of Alternation: Related Colors.

Repeat circles or squares (colored tablets) in a row and in a field (repetition of rows) with alternation of closely related colors. For each exercise use but two colors: Red and Orange, Orange and Yellow, Yellow and Green, Green and Blue, Blue and Violet, Violet and Red.

18. An Exercise in Sequences of Alternation: Related Colors.

Repeat the above exercise, using colored crayons, pegs or match sticks dipped in water-color or ink.

19. An Exercise in Sequences of Alternation: Complementary Colors.

Repeat with alternation in a row and in a field (repetition of rows) complementary colors, Yellow and Violet, Red and Green, Orange and Blue, using colored tablets, pegs or crayons, or match sticks and water color.

20. An Exercise in Sequences of Alternation: Value. Extreme Contrasts, Black and White.

Repeat black and white with alternation in a row, and in a square or oblong area. Use white paper and black crayon on a gray background or white and black crayons on gray.

21. Teach the children to recognize the Oval. Find similar shapes in nature and in works of art.

22. An Exercise in Sequences of Repetition: Ovals.

Arrange oval tablets in a row at regular intervals, near together, far apart, single or grouped. Make several variations. Find similar arrangements in nature and in works of art.

23. An Exercise in Sequences of Alternation: Ovals.

Repeat ovals in a row at regular intervals with the following changes in alternation: (a) change in attitude, (b) change in size, (c) change in number, (d) change in shape.

Find similar examples in nature and in works of art.

24. An Exercise in Balance.

(a) **Axial.**— Arrange two ovals in right-and-left balance on a vertical axis.

Find similar examples in nature and in works of art.

(b) Balance six or more ovals right and left on a vertical axis.

Find similar examples in nature and in works of art.

REPRESENTATION.

Directed Observation. Five lessons to practise drawing people, studying heads and appropriate dress.

Draw a man and a woman, standing full front view, dressed for gardening.

Draw a human head, showing by hair and hat what kind of a person it is, *e. g.*, man, woman, boy or girl.

Draw a woman and girl dressed for washing dishes.

Draw two little girls dressed for a party.

Draw two boys dressed to go out in a snowstorm.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

Jack-in-the-Box.

- (1) Lay out and cut two 3-inch by 9-inch rectangles. (2) Make a 3-inch double rectangle. (3) Draw free-hand a pumpkin with stem and Jack-'o-Lantern face. Make this the right size to fit the double rectangle. Allow the stem to project.

Open Box.

- (1) Lay out and cut two 2-inch by 6-inch rectangles. (2) Use these to make a 2-inch double rectangle. (3) Lay out and cut one 2-inch by 9-inch rectangle. (4) Draw the long diameter. (5) Draw four lines parallel to one short edge and 2, 4, 6 and 8 inches from it. (6) Cut on each short line as far as the long diameter. (7) Fold on all lines. (8) Insert the cut rectangles into the open spaces on the four sides of the double rectangle. Result is an open box.

Stool.

- (1) Make the open box. (2) Stand it on the desk to form a stool. (3) Make free-hand cuts on each side to make legs to the stool.

DECEMBER. DESIGN.

25. **Central Balance.**—Balance ovals on a vertical axis with balance on a center in fours, eights, sixteens.

Balance ovals on a center in threes, fours, fives, sixes, etc.

Find similar arrangements in nature and in works of art.

26. An Exercise in **Sequences of Progression: Ovals.**

Arrange ovals (*a*) in a row, (*b*) in an oval area, and (*c*) in a field, increasing or decreasing in size or number in orderly progression.

Find similar sequences in nature and in works of art.

27. An Exercise in **Sequences of Progression: Related Colors.**

Using colored tablets, select three warm colors. Arrange in the order of close relationship, Yellow, Orange, Red.

Select three cold colors, arrange in similar manner, Violet, Blue, Green. Arrange a series, warm to cold. Arrange groups of three related colors in the order of relationship, *e. g.*:

Y. G. B.

V. R. O.

G. B. V.

R. O. Y.

B. V. R.

O. Y. G.

28. An Exercise in Sequences of Repetition: Color Sequences.

Arrange units, representing a color sequence, at regular intervals in a row, *e. g.*, Y. O. R., Y. O. R., Y. O. R.

Use tablets, pegs, colored paper, crayon or match sticks with water-color.

Repeat the exercise with other color sequences.

29. Teach the children to recognize the Equilateral Triangles.

Find similar shapes in nature and in works of art.

30. An Exercise in Sequences of Repetition: Equilateral Triangles.

Arrange equilateral triangles in a row at regular intervals, near together, far apart, single or grouped. Make several variations.

Find similar examples in nature and in works of art.

REPRESENTATION.**Imaginative Drawing.** (Five lessons.)

Draw pictures in which people are important, *e. g.*:

When father comes home and meets the children.

When mother goes away and says good-bye to the children.

The teacher arriving at school.

Children leaving school.

Children on the playground, playing a ring game.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Free Expression.

Invent models based on the double rectangle.

Note.

For measuring and ruling on rectangles, unless otherwise stated, place paper with one long edge at the top.

Sled.

Seat.—(1) Lay out and cut one 3-inch by 6-inch rectangle. (2) Draw two lines on this rectangle parallel to the left short edge and 2 and 4 inches from it. (3) Lay out and cut a 2-inch by 7-inch rectangle. (4) Draw two lines on this rectangle parallel to the left short edge and 2 and 5 inches from it. (5) Fold and make a 2-inch by 3-inch double rectangle. This makes the seat for the sled.

Runners.—(1) Lay out and cut two 3-inch by 6-inch rectangles. (2) Fold each on its long diameter. (3) Place folded edge at the bottom and draw a line parallel to upper open edges and

1 inch from them. (4) Draw two lines parallel to left short edge and 1 and 4 inches from it. (5) Keep folded and cut out the square on the left and the large rectangle on the right. (6) Fold and insert into the seat to form runners. (7) Curve the runners.

Note.

Keep this model for the next lesson.

JANUARY. DESIGN.

31. An exercise in **Sequences of Alternation: Equilateral Triangle**.
Repeat equilateral triangles in a row at regular intervals, with the following changes in alternation: (a) change in attitude, (b) change in shape, (c) change in number, (d) change in size.
32. An Exercise in **Balance: Equilateral Triangles**.
(a) **Axial**.—Arrange two equilateral triangles in left and right balance on a vertical axis. Balance six or more equilateral triangles left and right on a vertical axis.
Find similar examples in nature and in works of art.
33. An Exercise in **Central Balance**.
(b) **Central**.—Balance four equilateral triangles right and left on a vertical axis with balance on a center.
Find similar examples in nature and in works of art.
Arrange equilateral triangles balanced on a center in threes, fours, fives, sixes, etc.
Find similar examples in nature and in works of art.
34. An Exercise in **Sequences of Progression: Equilateral Triangles**.
Arrange equilateral triangles (a) in a row, (b) in an area, and (c) in a field, increasing or decreasing the size or number in orderly progression.
Find similar sequences in nature and in works of art.
35. An Exercise in **Sequences of Repetition: Tone-Balance, Color (Extreme Contrasts, Complementary Colors)**.
Repeat groups of colored tablets representing any two complementary colors in a row at regular intervals.
Repeat the exercise with other pairs of complementary colors, using tablets, pegs, crayons or match sticks with water-color.
Find similar color balance in nature and in works of art.

36. An Exercise in Sequences of Repetition: Tone=Balance; Values (Extreme Contrasts, Black and White).

Through the middle of a 2-inch wide strip of gray drawing paper, outline a row of 1-inch circles, squares or other shapes in groups of two; with black and white crayons fill in each group.

REPRESENTATION.

Directed Observation. Five lessons to study people in relation to their surroundings.

Draw a man standing in front of a fence.

Draw a woman standing in front of a door.

Draw a man near his house.

Draw a little girl near a tree. Practise drawing a tree.

Draw a man, a boy and a little dog.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

Double Runner.

Make another sled, using the same dimensions as in the last lesson.

Seat.— (1) Lay out and cut a 4-inch by 10-inch rectangle. (2) Draw two lines on this rectangle parallel to the upper long edge and 1 and 3 inches from it. (3) Fold on these lines. (4) Lay out and cut a 2-inch by 12-inch rectangle. (5) Draw two lines on this rectangle parallel to the left short edge and 1 and 11 inches from it. (6) Fold on lines. (7) Make 2-inch by 10-inch double rectangle. Lay this on the two sleds to form a double runner.

Chair.

(1) Lay out and cut two 2-inch by 6-inch rectangles. (2) Make a 2-inch double rectangle. This forms the seat of the chair. (3) Lay out and cut a 3-inch by 9-inch rectangle. (4) Draw a line parallel to the upper long edge and 1 inch from it. (5) Draw four lines parallel to left short edge and 2, 4, 6 and 8 inches from it. (6) Cut from the top on each short vertical line as far as the horizontal line. (7) Fold on all lines and insert small cut rectangles as in open box. (8) Cut free-hand openings to form legs to the chair. (9) Lay out and cut a 2-inch by 4-inch rectangle. (10) Draw a line on this rectangle parallel to the left short edge and 1 inch from it. (11) Fold on this line and insert to make chair back.

FEBRUARY. DESIGN.

37 to 40. Exercises in Sequences of Repetition: Tone-Balance (Intensity, Bright and Dull Color).

With colored crayons make units composed of one or more elements, arranging them in a row or in a field by repetition of rows.

These exercises are rhythmic in character, the class counting aloud in unison while drawing.

The counting touches are made with the duller crayons, greens, black, brown. A touch of bright color is added afterwards without counting.

Find similar examples of bright and dull color in nature and in works of art.

41. An Exercise in Tone-Balance and Tone-Sequence.

Arrange the six standard colors in related order in a row, and in a circle to form the spectrum, using crayons.

Place yellow at the top of the circle.

Find similar examples in nature of tone sequence and tone balance.

42. Teach the children to recognize the Isosceles Triangle.

Find similar shapes in nature and in works of art.

43. An Exercise in Sequence of Repetition: Isosceles Triangle.

Arrange isosceles triangles in a row at regular intervals, near together, far apart, single and grouped.

Make several variations.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures in which people, trees, houses, etc., are important, *e. g.*:

Men planting a young tree near the school.

A man climbing a tree with a ladder, to trim dead branches.

Two men painting and mending a fence.

A woman and a cat waiting for a door to open.

A woman and boy trying to unlock a gate.

Men painting a house.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Table.

- (1) Lay out and cut a 3-inch by 12-inch rectangle. (2) Draw two lines on this rectangle parallel to the left short edge and 3 and 9 inches from it. (3) Lay out and cut a 6-inch by 9-inch rectangle. (4) Draw two lines on this rectangle parallel to the

left short edge and 3 and 6 inches from it. (5) Fold rectangles and make a 3-inch by 6-inch double rectangle. This makes the top of the table. (6) Lay out and cut two 4-inch by 12-inch rectangles. (7) Draw two lines in each rectangle parallel to the left short edge and 3 and 9 inches from it. (8) Draw one line parallel to upper long edge and 1 inch from it. (9) Cut from the top on short vertical lines as far as the long horizontal line. (10) Insert into the double rectangle to form the sides of the table. (11) Make free-hand openings in each side to form the table legs.

Settle.

- (1) Lay out and cut a 2-inch by 12-inch rectangle. (2) Draw two lines parallel to left short edge and 4 and 8 inches from it. (3) Lay out and cut a 4-inch by 6-inch rectangle. (4) Draw two lines on this rectangle parallel to the left short edge and 2 and 4 inches from it. (5) Fold on lines and make a 2-inch by 4-inch double rectangle. This forms the seat of the settle. (6) Lay out and cut two 3-inch by 8-inch rectangles. (7) Draw two lines on each rectangle parallel to the left short edge and 2 and 6 inches from it. (8) Draw one line parallel to the upper long edge and 1 inch from it. (9) Cut from the top on each short vertical line as far as the long horizontal line. (10) Insert into double rectangle to form sides of the settle. (11) Cut free-hand openings to form legs of the settle. (12) Lay out and cut a 3-inch by 8-inch rectangle. (13) Draw two lines on this rectangle parallel to the left short edge and 2 and 6 inches from it. (14) Draw one line parallel to the upper long edge and 1 inch from it. (15) Cut from the top on each vertical line as far as the horizontal line. (16) Fold on lines and insert to form the arms and back of the settle. (17) The arms may be modified by cutting and rounding corners.

MARCH. DESIGN.

44. An Exercise in **Sequences of Alternation: Isosceles Triangles.**
Repeat isosceles triangles in a row at regular intervals with the following changes in alternation: (a) change in attitude, (b) change in size, (c) change in number, (d) change in shape.
45. An Exercise in **Balance: Isosceles Triangles.**
(a) **Axial.**—Arrange two isosceles triangles in right and left balance on a vertical axis. Balance six or more isosceles triangles right and left on a vertical axis.
Find similar examples in nature and in works of art.

46. (b) **Central Balance.**— Arrange four isosceles triangles in left and right balance on a vertical axis with balance on a center.
Repeat with eight.
Balance isosceles triangles on a center in threes, fours, fives and multiples.
Find similar examples in nature and in works of art.
47. An Exercise in **Sequences of Progression: Isosceles Triangles.**
Arrange isosceles triangles (a) in a row, (b) in an area, (c) in a field, increasing or decreasing in size or number in orderly progression.
48. Teach the children to recognize **parallel** directions. Draw parallel, vertical and horizontal lines.
Find examples in nature and in works of art.
49. Fold and cut a 6-inch square from a 6 by 9 inch sheet of drawing paper.
Make three folds forming four parallel strips.
Make folds at right angles forming an area of squares.
50. An Exercise in **Sequences of Alternation: Oblique Lines.**
Repeat oblique lines with left and right **alternation**, in a row, touching, forming the zigzag movement.
Repeat the exercise, using long oblique and short vertical.
For each line arrangement use but one color. Make several arrangements, each with a different color.
Find examples of zigzag movement in nature and in works of art.
Note.— These two-line exercises in Repetition with Alternation may be rhythmic counting exercises, counting "one-two," and drawing with crayons.
51. An Exercise in **Sequences of Alternation: Right Angles, or Vertical and Horizontal Lines.**
Repeat right angles, touching, with change in attitude forming the Greek fret.
For each line arrangement use but one color; make several arrangements, each with a different color.
Find this arrangement in works of art.
52. An Exercise in **Sequences of Alternation: Simple Curves.**
Repeat simple curves in a row, touching, with up-and-down change in attitude forming the **meander** movement.
Find examples of the meander movement in nature and in works of art.

REPRESENTATION.

Directed Observation. Five lessons to study action, carrying, lifting, etc.

Draw a boy carrying a pail of water in one hand.

Draw a man carrying a heavy box in both hands, front view.

Draw a woman carrying a basket on her arm.

Draw two children carrying a basket between them.

Draw a mother with a baby in her arms.

MANUAL TRAINING.

There are four twenty-minute lessons in this month.

Free Expression.

Invent models based on the previous work.

Bed.

- (1) Lay out and cut a 2-inch by 9-inch rectangle. (2) Draw two lines on this rectangle parallel to the left short edge and 2 and 7 inches from it. (3) Lay out and cut a 5-inch by 6-inch rectangle. (4) Draw two lines on this rectangle parallel to the left short edge and 2 and 4 inches from it. (5) Fold lines on each rectangle and make a 2-inch by 5-inch double rectangle. This forms the top of the bed. (6) Lay out and cut two 2-inch by 9-inch rectangles. (7) Draw two lines on each rectangle parallel to the left short edge and 2 and 7 inches from it. (8) Draw one line parallel to upper long edge and 1 inch from it. (9) Cut from the top on each vertical line as far as the horizontal line. (10) Fold on lines and insert into the double rectangle to form the sides of the bed. (11) Lay out and cut two 2-inch by 6-inch rectangles. (12) Fold one on its short diameter and draw a line parallel to the short open edges and 1 inch from them. (13) Fold on this line and insert to make the headboard. (14) Fold the other rectangle on its short diameter and draw a line parallel to the short open edges and 2 inches from them. (15) Fold on this line and insert to make the footboard. The head and foot boards may be modified by folding and cutting.

APRIL. DESIGN.

53. Exercises in Sequences of Repetitions (in a field): Color.

Outline sixteen 1-inch squares arranged, not quite touching, in form of a square.

Repeat with circular tablets, touching.

Use a white background and fill in each shape, thus outlined, with crayon, using but one color for each exercise.

Note.— These color exercises in “all over” patterns may be of greater value if each row of pupils uses a different color, all pupils being allowed to **see the effect in all six colors.**

Use tablets if drawing is too difficult.

54. An Exercise in Sequences of Repetition.

Using tablets, allow each pupil to choose a shape he likes and to repeat it, single or grouped, at regular intervals, in a row and in a field, forming a square or oblong area.

55. Repeat the above with pegs, seeds, lentils.

56. Repeat the above with colored crayons or match sticks and water color.

57. An Exercise in Sequences of Alternation.

Using tablets, each pupil may select a shape he likes and repeat in a row with his own choice of change in alternation.

58. Repeat the above exercise with pegs, seeds, lentils, etc.

59. Repeat the preceding exercise, using colored crayons or match sticks with water color or ink.

REPRESENTATION.

Imaginative Drawing. Five lessons.

Continue subjects already studied, inventions, stories about them,
e. g.:

Grocery man, putting baskets into his wagon, drops a package. Boy picks it up for him.

A windy, rainy day bothers two women carrying a basket.

A pleasant day finds a mother with her children in the park, looking at the big elephant.

A woman carries out a big basket of clothes to hang on the line. The cat and a little girl go too.

Children gather round to watch two men paint a street sign.

MANUAL TRAINING.

There are three twenty-minute lessons in this month.

Free Expression.

Invent models based on previous work.

Bureau.

- (1) Lay out and cut four 3-inch by 9-inch rectangles. (2) Make two 3-inch double rectangles. (3) Lay out, rule and cut one 4-inch by 9-inch rectangle. (4) Draw two lines on this rectangle

parallel to upper long edge and 1 and 3 inches from it. (5) Draw two lines parallel to the left short edge and 3 and 6 inches from it. (6) Cut from the upper and lower edges on the vertical lines to the horizontal lines. (7) Fold all lines and insert the small rectangles into the two double rectangles to make the top and sides of the bureau. The double rectangles make the front and back. (8) Lay out and cut a 3-inch by 9-inch rectangle. (9) Fold this on its short diameter and insert to form the mirror. (10) Draw with lead pencil the mirror and drawers. The mirror may be modified by free-hand cutting.

MAY AND JUNE. DESIGN.

60. Exercises in **Axial Balance**, using (a) two tablets, (b) six or more tablets. Ask each pupil to make several arrangements of right and left balance on a vertical axis, making his own choice of shapes.
61. Repeat the preceding exercise, using pegs, seeds, lentils, etc.
62. Repeat the preceding exercise, using colored crayons or match sticks with water color.
63. Exercises in **Central Balance** (using tablets). Ask each pupil to make several arrangements of right and left balance on a vertical axis with balance on a center, making his own choice of shapes.
64. Repeat the preceding exercise, using pegs, seeds, lentils, etc.
65. Repeat the preceding exercises, using colored crayons or match sticks with color.
66. Exercises in **Central Balance**.
Using tablets, the pupils may make several arrangements of balance on a center in threes and multiples of three; fours and multiples of four; fives and multiples of five, making their own choice of shapes.
67. Repeat the preceding exercise, using pegs, lentils, seeds, etc.
68. Repeat the preceding exercise, using colored crayons or match sticks and color.
69. Exercises in **Sequences of Progression** (using tablets).
Ask the pupils to make their own choice of shapes and arrange them (a) in a row, (b) in an area, and (c) in a field, increasing or decreasing in number or size in orderly progression.
70. Repeat the preceding exercise, using pegs, lentils, seeds.

71. Repeat the preceding exercise, using colored crayons or match sticks and color.

REPRESENTATION.

Directed Observation. (Five lessons.)

Select a building or other local subject for special study.

Draw from memory or general knowledge. Compare results.

Study from the window or go out of doors to get a better idea of building, tree or other object chosen for study.

Notice general plan of objects.

Draw from memory.

Go again to study the same object. Notice details and color.

Draw from memory.

Imaginative Drawing. (Five lessons.)

Draw pictures in which the object previously studied furnishes a setting or background for a story, *e. g.*:

Women buying fruit in front of the grocery store.

People looking at things in a store window.

Children gathered around the school door at noon.

A picnic under a tree or a group of trees.

Crowd of people coming out of a building.

MANUAL TRAINING.

There are seven twenty-minute lessons in these months.

Tilt.

- (1) Lay out and cut a 4-inch by 10-inch rectangle. (2) Draw two lines on this rectangle parallel to upper long edge and 1 and 3 inches from it. (3) Lay out and cut a 2-inch by 12-inch rectangle. (4) Draw two lines on this rectangle parallel to left short edge and 1 and 11 inches from it. (5) Fold lines on these rectangles and make a 2-inch by 10-inch double rectangle. This forms the board to the tilt. (6) Lay out and cut four 2-inch by 6-inch rectangles. (7) Make two 2-inch double rectangles. (8) Lay out and cut a 2-inch by 8-inch rectangle. (9) Draw three lines on this rectangle parallel to left short edge and 2, 4 and 6 inches from it. (10) Fold on all lines and pass the strip through one double rectangle, and insert both end squares in the other double rectangle. This forms a triangular prism, which is the base or fulcrum for the tilt.

Free Expression.

Make original models.

DRAWING. GRADE III.

DESIGN.

There are seventy exercises in this series to be followed in consecutive order.

Time allotment: Minimum, one hundred minutes; maximum, one hundred twenty minutes.

SEPTEMBER. DESIGN.

1. An Exercise in **the Study of Tone Contrast: Light and dark.**

Teach the children to recognize light and dark color and to distinguish different degrees of light and different degrees of dark; *e. g.*, select a color — find one lighter; find one darker, etc. Select a light color — find one lighter. Select a dark color — find one darker.

2. An Exercise in **Tone-Study. Value — Middle Gray.**

Lead the children to recognize **middle gray**, the half-way step between white and black in the standard scale of values. Outline a row of circles, squares or oblongs arranged at regular intervals, and color middle gray with crayon.

3. An Exercise in **Tone-Relations — Sequence — Value, Neutral Gray.**

Show the pupils the neutral value scale. Find middle gray and arrange a scale white to black (white, middle gray, and black). Use crayons, paper or water-color.

4. An Exercise in **the Study of Tone-Sequence. Color, Yellow.**

Neutralization to white; yellow — full intensity; yellow — one half neutralized to white, and white.

Show the pupils standard yellow, neutralized to white. Find a half-way step to white and arrange in a scale of yellow to white, three steps. Use colored paper. Paste on a neutral gray background.

5. An Exercise in **the Study of Tone-Sequence. Color, Yellow.. Scale; Yellow, Dark=Yellow and Black.**

Show the pupils standard yellow neutralized in the scale of nine values to black. Find a half-way step to black and arrange in a scale of three steps, yellow to black — **Yellow, Dark=Yellow and Black.** Paste on a neutral gray background.

LETTERING.

Time.

Four thirty-minute lessons.

Lettering.

Practise making the letters in the order of difficulty, beginning with the "I" group. (See letter charts.)

Practise lettering words. Keep letters close together.

Letter the name and grade on the envelope.

OCTOBER. DESIGN.

6. Find examples of standard yellow, light and dark, in nature and in works of art.
7. An Exercise in **Repetition with Size=Alternation. Color, Yellow.**
With the $\frac{1}{2}$ -inch and 1-inch circular tablets as patterns, pupils may outline three of each, placing alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" bright yellow with colored crayon.
8. An Exercise in **Repetition with Tone=Alternation — Value and Intensity. Light-Yellow and Normal Yellow.**
With the circular tablet as a pattern the pupils may outline and cut from colored paper six circles, three light and three normal standard yellow. They may be pasted (alternating the two values) in a row at regular intervals. Use a 2-inch wide strip of white or neutral gray paper.
9. An Exercise in **Repetition with Tone=Alternation — Value, Black and White.**
Select gray paper and any geometric shape and draw six outlines in a row at regular intervals. Using black and white crayons, "paint" the squares black and white, alternating the tones.
10. An Exercise in **Recognition of Tone=Sequence. Color, Orange. Scale; Orange. Light=Orange and White.**
Show the pupils standard orange, neutralized to white and to black, in the scale of nine values. Find a half-way step to white and arrange in a scale of orange to white. (Three steps.) Use colored paper. Paste on a neutral gray background.
11. An Exercise in **Recognition of Tone=Sequence. Color, Orange. Scale; Orange, Dark=Orange and Black.**
Show pupils standard orange neutralized to black in the scale of nine values. Find a half-way step to black and arrange in a scale of three steps, orange to black. Paste on a neutral gray background.
12. Find examples of **Standard Orange, light and dark**, in nature and in works of art.

13. An Exercise in Repetition with Size=Alternation. Color, Orange.

With the $\frac{1}{2}$ -inch and 1-inch square tablets as patterns, pupils may outline three of each, placing large and small alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" bright orange with colored crayon.

14. An Exercise in Repetition with Tone=Alternation — Value and Intensity. (Light and bright orange.)

With the square tablet as a pattern, the pupils may outline and cut from colored paper six squares, three light and three bright orange. Alternate the two values in a row at regular intervals through the middle of a 2-inch strip of white or neutral gray paper.

REPRESENTATION.**Time.**

There are thirty-one thirty-minute lessons in this course.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress.

Refer often to the general note on Representation, pages 6, 7, 8, 9, 10.

The subjects for pictures will naturally center around things as seen by the children in their daily experiences. In this grade special study of people, animals and vehicles is suggested.

Compare results at the end of each lesson to see if the pictures tell the truth. Use black, white, middle gray and colors to help tell the truth.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Describe types of people rather than special individuals. Avoid any attempt at portraiture. Real people and pictures may be studied for general facts of shape, proportion and color but not for individual likenesses. Use descriptive adjectives like tall, thin, short, stout, old and bent, light or dark colored, bright or dull, warm or cool colored, etc. The teacher may get ideas from good illustrations, describing a picture to the children but not showing it to them until they have made their pictures. No two pictures in the class should be alike, although inspired by the same suggestions. The whole class should work on the same subject in order to compare results which are similar. Never compare unlike things.

Imaginative Drawing. (Five lessons.)

Draw pictures trying to be true to nature.

- A woman wheeling a baby in a carriage.
- A man with a push cart selling fruit or vegetables.
- A boy playing with a velocipede.
- A workman with a wheelbarrow and lawn mower fixing the park.
- Children playing with a toy cart near the front door of their home.

MANUAL TRAINING.

There are four thirty-minute lessons in this month.

Aims.

- To organize activities induced by the play instinct.
- To develop ability to follow directions.
- To develop the power of free expression.

Means.

- Constructing familiar objects of paper.
- Working from dictation and working independently.
- Measuring and laying off inches and half-inches.
- Ruling and cutting on straight and curved lines.

Minimum Requirements.

- Ten simple articles of paper.
- Ability to measure and lay off inches and half-inches.
- Ability to cut on straight and curved lines.

There are thirty-two lessons in this series, one thirty-minute lesson each week, beginning in October.

Learn half-inch. Practise measuring books, papers, splints, etc.

Review the fact that distance is a space which may be marked off with dots. Lay off distances on ruled lines.

Use 9-inch by 12-inch gray paper furnished for manual training.

Discuss and show finished model at the beginning of each lesson.

Save all pieces of paper left from each lesson which may be used for other models. Teach economy.

All the work of this grade is based upon the "Jessie Davis Construction Work."

For measuring and ruling, unless otherwise stated, place paper with long edge at the top.

Seat.

- (1) Lay out and cut a 4-inch square.
- (2) Fold this on one diameter.
- (3) Keep folded and draw two lines parallel to left short edge and $\frac{1}{2}$ and $3\frac{1}{2}$ inches from it.
- (4) Place dots on these lines $\frac{1}{2}$ inch from the long open edges.
- (5) From the folded edge cut on these lines as far as the dots.
- (6) Lay out and cut two 2-inch by $2\frac{1}{2}$ -inch rectangles.
- (7) Insert these into the cuts to make a seat. Stand model on the desk.

Chair.

- (1) Lay out and cut a 3-inch by 4-inch rectangle. (2) Fold on the short diameter. (3) Keep folded and draw two lines parallel to left short edge and $\frac{1}{2}$ and $2\frac{1}{2}$ inches from it. (4) Place dots on these lines $\frac{1}{2}$ inch from the open edges. (5) From the folded edge cut on these lines to the dots. (6) Lay out and cut two 2-inch by $2\frac{1}{2}$ -inch rectangles. (7) Insert these into the cuts to make a chair.

NOVEMBER. DESIGN.

15. An Exercise in **Repetition with Tone=Alternation — Value, Middle Gray and White.**

Select any geometric shape and draw six outlines in a row at regular intervals. Using middle gray crayon, "paint" every alternate square middle gray.

16. An Exercise in **Recognition of Tone=Sequence. Color, Red.**

Show the pupils standard red, neutralized to white in the scale of nine values. Find a half-way step to white and arrange in a scale, red to white (three steps). Use colored paper. Paste on neutral gray background.

17. An Exercise in **Recognition of Tone=Sequence. Color, Red.**

Show pupils standard red neutralized to black in the scale of nine values. Find a half-way step to black and arrange in a scale of three steps, red to black. Use colored paper. Paste on a neutral gray background.

18. Find examples of standard red, light and dark, in nature and in works of art.

19. An Exercise in **Repetition with Size=Alternation. Color, Red.**

With the $\frac{1}{2}$ -inch and 1-inch wide oblong tablets as patterns, pupils may outline two or three of each, placing large and small alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" bright red with colored crayon.

20. An Exercise in **Repetition with Tone=Alternation — Value and Intensity.** (Light and bright red.)

With the oblong tablet as a pattern the pupil may outline and cut from colored paper four or five oblongs, two or three bright red and two or three light. Alternate the two values in a row at regular intervals through the middle of a 2-inch strip of white or neutral gray paper.

21. An Exercise in Repetition with Tone=Alternation — Value, Middle Gray and Black.

Select any geometric shape and draw six outlines in a row at regular intervals. Using middle gray and black crayons, alternate the two tones in a sequence of repetition.

22. Exercise in Recognition of Tone=Sequence. Color, Violet. Scale, Violet, Light=Violet and White.

Show the pupils standard violet, neutralized to white in the scale of nine values. Find a half-way step to white and arrange in a scale of violet to white (three steps). Use colored paper. Paste on a neutral gray background.

REPRESENTATION.

Directed Observation. (Five lessons, to practise drawing vehicles.)

Toys may be used as models. Choose one which is available for directed observation, *e. g.*:

Study and draw an automobile. Notice the essential parts and their relation to each other.

Draw the same vehicle. Study proportion and true color.

Notice values, *e. g.*: "Which colors are light?" "Which colors are dark?" "Do you find any middle value colors?" "Is the color bright or dull?"

Choose another vehicle for study, *e. g.*:

A cart with a horse. Study wheels and other parts, noticing points of similarity and difference.

Look out the window or go out of doors to make observations.

Draw from memory the vehicle studied in previous lesson.

Show the true color.

Study and draw again the vehicle already studied, trying for improvement.

MANUAL TRAINING.

There are three thirty-minute lessons in this month.

Free Expression.

Encourage the children to make original models on plan of those previously made.

Table.

- (1) Lay out and cut a $3\frac{1}{2}$ -inch by $5\frac{1}{2}$ -inch rectangle. (2) Fold this on its long diameter. (3) Keep folded and draw two lines parallel to left short edge and $\frac{1}{2}$ and 5 inches from it. (4) Place

dots on these lines $\frac{1}{2}$ inch from the upper open edges. (5) From the folded edge cut on these lines to the dots. (6) Open the rectangle. This is the top of the table. (7) Lay out and cut a $2\frac{1}{2}$ -inch by $8\frac{1}{2}$ -inch rectangle. (8) Draw two lines on this rectangle parallel to the left short edge and 2 and $6\frac{1}{2}$ inches from it. (9) Fold on these lines. (10) Carry this rectangle through the cuts to make a table.

DECEMBER. DESIGN.

23. Find examples of standard violet, light and dark tones, in nature and in works of art.
24. An Exercise in **Repetition with Size=Alternation. Color, Violet.**
With the $\frac{1}{2}$ -inch and 1-inch wide triangular tablets as patterns, pupils may outline three of each, placing large and small alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" violet standard, using colored crayon.
25. An Exercise in **Repetition with Tone=Alternation — Value and Intensity.** (Light and normal violet.)
With the triangular tablet as a pattern, the pupil may outline and cut from colored paper six violet triangles, three light and three normal violet. Alternate the two values in a row at regular intervals through the middle of a 2-inch strip of white or gray paper.
26. Review **Diameter** by drawing and folding exercises.
Fold and cut a square. Fold opposite edges together, forming the diameter. (See Manual Training.)
Fold and cut an oblong. Draw the diameters.
27. An Exercise in **Recognition of Tone=Sequence. Color, Blue. Scale, Blue, Light-Blue and White.**
Show the pupils standard blue neutralized to white, in the scale of nine values. Find a half-way step to white and arrange in a scale of blue to white, three steps. Use colored paper. Paste on a neutral gray background.
28. An Exercise in **Recognition of Tone=Sequence. Color, Blue. Scale; Blue, Dark-Blue and Black.**
Show the pupils standard blue neutralized to black in the scale of nine values. Find a half-way step to black, and arrange in a scale of three steps, blue to black (blue, dark-blue and black.) Paste on a neutral gray background.

REPRESENTATION.

Imaginative Drawing. (Five lessons.)

Draw pictures in which people and vehicles are important, *e. g.*:

The family out for a walk. Baby is in a carriage or go-cart and one of the children has a wheel toy.

Some fun on wheels.

The newsboy and his cart.

Two men and a boy mending and painting a cart.

The dolls out for a ride.

MANUAL TRAINING.

There are three thirty-minute lessons in this month.

Rings.

- (1) Lay out and cut a 2-inch by 9-inch rectangle. (2) Draw two lines parallel to the left and right edges and 1 inch from them. (3) Place a dot on each line 1 inch from the upper long edge. (4) Cut on the right-hand line from the lower edge to the dot. (5) Cut on the left-hand line from the upper edge to the dot. (6) Insert each end of rectangle in slit in opposite end. Call this method of fastening a "lock joint." Experiment with rectangles of different sizes, and make a chain for a Christmas tree decoration.

Christmas Box.

- (1) Use a 9-inch by 12-inch piece of paper. (2) Draw two lines parallel to the upper long edge and 2 and 7 inches from it. (3) Draw six lines parallel to the left short edge and $\frac{1}{2}$, $2\frac{1}{2}$, $4\frac{1}{2}$, $7\frac{1}{2}$, $9\frac{1}{2}$ and $11\frac{1}{2}$ inches from it. (4) Cut on the horizontal lines at left and right as far as the two vertical center lines. (5) Fold center oblong to form bottom of the box. (6) Fold long strips to form sides of the box. (7) Two and one-half inches from each end of the box now formed, draw a vertical line on each strip, and locate the center of each line. Make proper cuts to form a "lock joint" on each side of the box. (8) Fold the remaining paper over the long sides of the box to form double sides, allowing the $\frac{1}{2}$ -inch strip to rest in the bottom.

JANUARY. DESIGN.

29. Find examples of standard blue, light and dark tones, in nature and in works of art.
30. An Exercise in Repetition with Size=Alternation. Color, Blue.

With the $\frac{1}{2}$ -inch and 1-inch elliptical tablets as patterns, pupils may outline three of each, placing large and small alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" bright blue with colored crayon.

31. An Exercise in **Repetition** with **Tone-Alternation** — **Value and Intensity.** (Light and bright blue.)

With the elliptical tablet as a pattern, the pupil may outline and cut from colored paper five or six ellipses, two or three light and two or three bright blue. Alternate the two values in a row at regular intervals through the middle of a 2-inch strip of white or neutral gray paper.

32. Review **Diagonal** by drawing and folding.

Fold and cut a square. Fold one corner to meet the opposite corner, forming a diagonal. Make a second fold, forming the second diagonal. (See Manual Training.)

Fold and cut an oblong. Draw the diagonals.

33. Exercise in **Recognition of Tone-Sequence. Color, Green. Scale; Green, Light-Green and White.**

Show the pupils standard green, neutralized to white in the standard scale of nine values. Find a half-way step to white and arrange in a scale of green to white, three steps. Use colored paper. Paste on a neutral gray background.

34. An Exercise in **Recognition of Tone-Sequence. Color, Green. Scale; Green, Dark-Green and Black.**

Show the pupils standard green neutralized to black. Find a half-way step to black and arrange in a scale of three steps, green to black, **green, dark-green and black.** Paste on a neutral gray background.

35. Find examples of standard green, light and dark tones, in nature and in works of art.

36. An Exercise in **Repetition with Size-Alternation. Color, Green.**

With the $\frac{1}{2}$ -inch and 1-inch oval tablets as patterns, pupils may outline three of each, placing large and small alternately in a row at regular intervals through the middle of a 2-inch wide strip of white drawing paper. "Paint" bright green with colored crayon.

REPRESENTATION.

Directed Observation. Five lessons, to practise drawings of people appropriately dressed. Study color and color values.

Draw a boy and a girl dressed for school, in sweaters and winter hats.

Use dark colors appropriate for winter.

Draw a marketman dressed for his work. Study real people or pictures. Try to make the picture tell the truth.

Draw two little girls dressed for a party. Use light and bright colors appropriate for summer.

Draw a man dressed for a rainy day, with overcoat and an umbrella.

Draw a woman dressed to go out on a cold winter day, with a fur collar and muff.

MANUAL TRAINING.

There are four thirty-minute lessons in this month.

Corner Cupboards.

Shelves.— (1) Trace around a 5-inch circle. (2) Cut out the circle.

(3) Fold on two diameters to divide the circle into quarters.

(4) Cut the quarters. Use three for shelves. (5) On each

shelf-piece draw lines parallel to and $\frac{1}{2}$ inch from each straight edge. (6) Place a dot on each line $\frac{1}{2}$ inch from the curved edge.

(7) Cut on each line from the curved edge to the dot.

Sides of Cupboard.— (1) Lay out and cut a 4-inch by 5-inch rect-

angle. (2) Fold this on its long diameter. (3) Keep folded

and draw three lines parallel to left short edge and 1, $2\frac{1}{2}$ and 4

inches from it. (4) Cut on these lines from the folded edge to

within $\frac{1}{2}$ inch of the upper open edge. (5) Open half way.

Insert shelves so that the curved edges are flush with the front edges of the cupboard and are held in place by slits — "lock joint."

Free Expression.

Make original models.

FEBRUARY. DESIGN.

37. An Exercise in **Repetition with Tone-Alternation — Value and Intensity.** (Light and bright green.)

With the oval tablet as a pattern, the pupil may outline and cut from colored paper five or six ovals, three light and three bright green. Alternate the two values in a row at regular intervals through the middle of a 2-inch strip of white or neutral gray paper.

38. Review horizontal, vertical and diagonal directions.

Using pegs, seeds, lentils, tablets, etc., pencil or crayon, arrange several rows in each of the above directions.

Note.— The sequences of order involving arrangements of dots and lines may be made on $\frac{1}{4}$ -inch smooth squared paper (the

$\frac{1}{4}$ -inch square web), using pen and ink, pencil or colored crayons, or they may be made on drawing paper, plain or webbed, with colored crayons, match sticks with water-color, or with pencil.

39. Exercises in Sequences of Repetition: Dots. In a row, vertical, horizontal, diagonal.

Arrange dots in a row at regular intervals, near together or far apart, single or grouped. These may be counting exercises, the pupils counting aloud while drawing, the sound, movement, and expression occurring simultaneously: 1 — 2 or 1 — 2 — 3 or 1 — 2 — 3 — 4. Use pencil or colored crayons. Use but one color for each separate exercise. Make many arrangements varying the tone, shape, attitude, position or measure for each new arrangement.

Note.— “The order of repetition is perfect when all the elements, tone, measure, shape, attitude, intervals, etc., are repeated, with no change or differences, one part being just like another.”

Split peas and lentils are excellent for use in the above arrangements as “busy work.”

40. Find examples of repetition of dots in nature.

41. An Exercise in Sequences of Repetition: Dots. In a field (a repetition of rows).

Arrange several rows of repetitions, in a field, left to right, in parallel order, at regular intervals. Arrange rows of repetitions, in an up-and-down or vertical direction and on diagonals.

Find examples of dot-repetition in works of art.

42. Exercise in Sequences of Alternation: Dots. In a row — In a field.

Arrange dots at regular intervals in a vertical, horizontal or diagonal row or in a field (repetition of rows), near together or far apart, single or grouped, with the following changes in alternation: measure, attitude, interval, number.

43. Find examples of alternation of dots in nature and in works of art.

44. Exercise in Sequences of Alternation: Color. Value — The Six Standard Colors and Light and Dark. (Dots. In a row — In a field.)

Arrange dots in a vertical, horizontal or diagonal row at regular intervals or in a field (repetition of rows), with alternation of the following colors: (a) warm and cold (complementary), **Orange and Blue, Green and Red, Violet and Yellow;**

(b) **Light and Dark, Neutral Gray; (c) Light and Dark, color, e. g., light red and red, etc.** Use colored crayons or match sticks with water-color. For neutral gray use pencil or crayon.

REPRESENTATION.

Imaginative Drawing. (Three lessons.)

Draw pictures in which people and vehicles are important, *e. g.*:
Children stopping on their way to school to watch a man loading his team.

Two boys and a dog watching a man harness his horse.

The fire engine stopping at the building across the street.

MANUAL TRAINING.

There are three thirty-minute lessons in this month.

Rocking Chair. Seat and back.

- (1) Lay out and cut a 3-inch by 5-inch rectangle. (2) Draw a line parallel to left short edge and 2 inches from it. (3) Fold on this line. (4) Unfold. Fold rectangle on its short diameter and place with fold at lower edge. (5) Draw lines parallel to and $\frac{1}{2}$ and $2\frac{1}{2}$ inches from the left short edge. (6) Place dots $\frac{1}{2}$ inch down from open upper edge on these lines. (7) Cut from folded edge to these dots. (8) Open. (9) Fold on first crease to make the seat and back of the chair.

Rockers.—(1) Lay out and cut a 4-inch by $4\frac{1}{2}$ -inch rectangle. (2) Draw two lines parallel to left short edge and $2\frac{1}{2}$ and 3 inches from it. (3) Draw two lines parallel to upper long edge and $1\frac{1}{2}$ and $2\frac{1}{2}$ inches from it. (4) Cut out large upper rectangle which measures $1\frac{1}{2}$ inches by 3 inches and lower rectangle which measures $1\frac{1}{2}$ inches by $2\frac{1}{2}$ inches. (5) From the lower edge make a $\frac{1}{2}$ -inch cut on the remaining vertical line. (6) From the center of the left 1-inch edge make a $\frac{1}{2}$ -inch horizontal cut. (7) Connect the upper left corner with the lower right corner by a curved line made by tracing part of a 5-inch circle or drawn free-hand. (8) Cut on this curved line to make one side of the rocking chair. (9) Using this as a pattern, trace and cut the other side. (10) Complete the chair by locking the three pieces together.

Free Expression.

Make original models.

MARCH. DESIGN.

45. Repeat the above exercise in **Sequences of Alternation of Color.**
Dots — In a row and in a field, using related colors: **Orange and Yellow; Yellow and Green; Green and Blue; Blue and Violet; Violet and Red; Red and Orange.**
46. An Exercise in **Sequence of Repetition: Lines.** (In a row.)
Arrange vertical, horizontal or oblique lines in a vertical, horizontal or diagonal row at regular intervals, near together, far apart, single or grouped. These may be counting exercises, the pupils counting aloud while drawing, the sound, movement and expression occurring simultaneously. Use pencil or colored crayon and but one color for each separate exercise. Make many arrangements, varying the tone, shape, attitude, position or measure for each new arrangement.
Note.— Lines used in these exercises may be straight, curved or angular in shape. In tone they may be red, orange, yellow, green, blue or violet, or neutral gray. In measure, long, short, wide, narrow, and one or more in number. In attitude, the original or its inversions; turned on a center, the original may thus present a great variety of attitudes. In interval, long or short or equal.
47. An Exercise in **Sequences of Repetition: Lines.** (In a field.)
Arrange rows of line-repetitions in parallel order, vertical, horizontal or diagonal in direction.
Note.— The sequences of line repetition and alternation suggest many ideas for color and design in busy work with “card-sewing” exercises.
Find similar effects of line-repetition in nature and in the handiwork of man. Note the infinite variety of similar effects in the many weaves of fabrics.
48. An Exercise in **Sequences of Alternation: Lines.** (In a row.)
Arrange vertical, horizontal and oblique lines in a vertical, horizontal or diagonal row at regular intervals, near together, far apart, single or grouped, with the following changes in alternation: Measure (size, number and length), shape, interval and attitude.

REPRESENTATION.

Directed Observation. Four lessons to practise drawing a horse, after directed observation.

Study a real horse, near the school, or a photograph of a horse. Trace the lines of the head, neck and back to feel the shapes and sizes.

Draw from memory. Add appropriate color. Compare results.
Draw a horse with harness. Study parts of horse and harness from real horse, picture or toy horse.

Draw a horse, trying to improve on previous efforts. Add a cart.

Draw a horse and man, showing relative sizes.

MANUAL TRAINING.

There are four thirty-minute lessons in this month.

Cradle.

Body.—(1) Lay out and cut $4\frac{1}{2}$ -inch by $5\frac{1}{2}$ -inch rectangle. (2) Fold on its long diameter. (3) Unfold. Carry each long edge to the center. Crease. (4) Open. Fold on the diameter again. (5) Keep folded and draw two lines parallel to and $\frac{1}{2}$ inch from each short end. (6) Place dots $\frac{1}{2}$ inch from the upper open edges. (7) From the folded edge cut on these lines to the dots.

Rockers.—(1) Trace and cut out a 5-inch circle. (2) Fold on one diameter to divide the circle in halves. Cut in halves. (3) On each half-circle draw a line parallel to and $\frac{1}{2}$ inch from the straight edge. (4) Cut on this line. (5) Again draw a line on each piece parallel to and $\frac{1}{2}$ inch from the straight edge. (6) Place a dot on this line $1\frac{1}{2}$ inches from each end. (7) From each point draw a line perpendicular to the straight edge. Cut on each of these lines. (8) Complete the cradle by locking the three pieces together.

Dog House.

Roof and Sides.—(1) Lay out and cut a $3\frac{1}{2}$ -inch by 5-inch rectangle. (2) Fold on its short diameter. (3) Unfold. Carry the short edges to the center. Crease. (4) Unfold. Fold the diameter again. (5) Keep folded and draw a line parallel to and $\frac{1}{2}$ inch from each short edge. (6) Place a dot $\frac{1}{2}$ inch down from top of each line. (7) From folded edge cut on each line to the dot.

Ends.—(1) Lay out and cut a $2\frac{1}{2}$ -inch by 3-inch rectangle. (2) From the upper edge lay off 1 inch on left and right short edges. (3) Mark center of upper long edge. (4) Draw lines connecting center dot with two side dots. (5) Cut on these slanting lines. (6) Measure in $\frac{1}{2}$ inch from ends of lower edge. Make $\frac{1}{2}$ inch vertical cuts from these points. (7) Trace around this piece for the other end of the dog house. A door may be cut free-hand. (8) Complete the dog house by locking the three pieces together.

APRIL. DESIGN.

49. An Exercise in **Sequences of Alternation of Tone: Color; Six standards. Value, light and dark.** (Lines in a row and in a field.)

Arrange lines in a vertical, horizontal or diagonal row at regular intervals or in a field (repetition of rows), with alternation of the following colors: (a) Warm and Cold Colors (Complementary), **Orange and Blue; Green and Red; Violet and Yellow;** (b) Values, Light and Dark, **Neutral Gray,** (c) Light and Dark, **Color.**

Note.—In alternating two units of unequal number or size, using the brighter color in the smaller measure gives a greater degree of color balance.

50. An Exercise in **Sequences of Progression of Measure (Dots).**

Arrange dots at regular intervals in a row, increasing or decreasing in number in orderly progression.

51. Exercises in **Balance: Dots.**

- (a) **Axial.**— Arrange dots left and right on a vertical axis.
 (b) **Central.**— Arrange dots left and right on a vertical axis with balance on a center.

52. Arrange dots around a center at equal distances in threes, fours, fives, sixes, sevens, eights, etc., and multiples.

Find examples of similar forms of balance in nature and works of art.

- 53, 54, 55. Exercises in **Sequences of Progression: Straight Lines.**

Arrange straight lines at regular or irregular intervals in a row and in a field, increasing or decreasing in measure in orderly progression.

Find similar examples in nature and in works of art.

REPRESENTATION.

Imaginative Drawing. (Four lessons.)

Draw pictures in which people and horses are important, *e. g.:*

Children watching a man feed his horse, under a tree.

A man blankets his horse because it is a cold day. A dog sits on the seat of the wagon.

Two men loading a moving team while the horses rest.

The friendly horse, taking a lump of sugar from a little girl's hand.

MANUAL TRAINING.

There are three thirty-minute lessons in this month.

Fence.

- (1) Lay out and cut four 1-inch by 12-inch rectangles. (2) Lock these four to form a fence.

Experiment to make gates, trees, animals and people that will stand up.

MAY. DESIGN.

56. Exercise in **Balance: Straight lines.**

- (a) **Axial.**— Arrange two straight lines in a balance of equal opposition of measure, shape, etc. Arrange two straight lines in a right and left balance on a vertical axis.
- (b) **Central.**— Balance six or more straight lines right and left on a vertical axis.

57. **Central Balance — Continued.**

Arrange four or more straight lines in a right and left balance on a vertical axis with balance on a center.

Arrange lines balancing on a center radiating at equal diverging angles, in three and multiples of three; four and multiples of four; five and multiples of five.

Find examples of similar forms of line balance in nature and in works of art.

58. An Exercise in **Axial Balance: Symmetry — Tablet laying.**

Find two circles. Arrange in right and left balance on a vertical axis. Make many similar arrangements, using different geometric shapes.

59. An Exercise in **Axial Balance: Symmetry.**

Draw geometric shapes, balanced left and right on a vertical axis. Draw several different pairs. Use square web paper or plain drawing paper.

60. An Exercise in **Central Balance: Tablets.**

Arrange tablets in left and right balance on a vertical axis with balance on a center. Make arrangements with many different shapes. Use one for center.

61. An Exercise in **Central Balance.**

Draw geometric shapes balanced left and right on a vertical axis with balance on a center. Make several arrangements, using different shapes. The paper may be plain drawing paper or the "square web."

62. An Exercise in **Central Balance: Tablets.**

Select a number of circles, ovals, ellipses, triangles, oblongs,

semicircles or squares. Arrange a central balance of three, four, five, six, seven or eight. Tablets, same shape and size. Arrange in threes and sixes, fours and eights, fives and tens. Repeat the preceding exercise, using sequences differing in shape and color. Select three related colors, *e. g.*:

R. O. Y.

G. B. V.

O. Y. G.

B. V. R.

Y. G. B.

V. R. O.

MANUAL TRAINING.

There are four thirty-minute lessons in this month.

May Basket.

- (1) Lay out and cut a 5-inch by 7-inch rectangle. (2) Draw two lines parallel to the left short edge and 2 and 5 inches from it.
- (3) Fold on the right line and while folded draw lines parallel to upper and lower edges and $\frac{1}{2}$ inch from them. (4) On each of these lines place a dot $1\frac{1}{2}$ inches from the fold. (5) Cut from the fold to these dots. (6) Unfold. (7) Fold on the left line and repeat the same process. (8) Unfold. (9) Fold the rectangle on its long diameter. (10) Keep folded and place dots on the lower folded edge $\frac{1}{2}$, $1\frac{1}{2}$, $5\frac{1}{2}$ and $6\frac{1}{2}$ inches from the lower left corner. (11) From these dots make cuts $\frac{1}{2}$ inch long.
- (12) Lay out and cut two 2-inch by 4-inch rectangles. (13) Make cuts from upper long edges $\frac{1}{2}$ inch long and $\frac{1}{2}$ inch in from left and right edges. (14) Insert these into the long cuts on the rectangle to form the sides of the basket. (15) Lay out and cut a 1-inch by 12-inch rectangle. (16) Insert this into the short cuts to form the handle of the basket. To make the handle strong bend the ends upward on the inside of the basket.

House.

- Roof and Sides — (1) Lay out and cut a $5\frac{1}{2}$ -inch by 12-inch rectangle. (2) Fold on short diameter for ridge pole. (3) Open. (4) Carry ends of rectangle to coincide with center. Crease. (5) Open. (6) Turn the paper over. (7) Draw lines parallel to and $2\frac{1}{2}$ inches from each short edge. (8) Fold on these lines so that paper is creased in opposite way from center creases. (9) Open. (10) Draw lines parallel to and $\frac{1}{2}$ inch from each long edge. (11) On these lines lay off and cut $1\frac{1}{2}$ inches from each end. (12) Fold ridge pole again. (13) From the fold lay off and cut 1 inch on both lines. (14) Open. These two 2-inch slots are for the chimneys.

Ends of House — (1) Lay out and cut a 4-inch by $10\frac{1}{2}$ -inch rectangle. (2) Fold on short diameter. Place fold at the bottom. (3) Draw lines parallel to and $2\frac{1}{2}$ inches from lower edge. (4) Draw lines parallel to and $\frac{1}{2}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$ and $3\frac{1}{2}$ inches from left side. (5) Place point $\frac{1}{2}$ inch down from top on center line. (6) Draw lines from this point to ends of horizontal line with paper still folded. Cut on these oblique lines, leaving 1-inch chimney in the center. (7) Cut in on horizontal lines to first vertical line. (8) From this point cut down on first vertical 1 inch. (9) Cut on fold to separate two ends of house. (10) Plan and cut door. (11) Put house together by locking.

JUNE. DESIGN.

63. An Exercise in Balance: Drawing.

Repeat the preceding lesson, using tablets. Ask each pupil to select the arrangement he likes and make a drawing on paper, in tone, using his own choice of color.

64. An Exercise in Measure=Sequence and Tone=Sequence: Warm Colors, Cool Colors.

Select any geometric shape in the $\frac{1}{2}$ -inch size. Draw. Use square web paper. Starting with the $\frac{1}{2}$ -inch size, arrange a symmetrical sequence, small to large, three steps, increasing in ratio 1:2. Paint with colored crayon warm colors, yellow to red, *i. e.*, yellow, orange, red.

Draw another measure sequence, using a different shape. Paint with colored crayons, using cool colors, green, blue, violet.

65. An Exercise in Measure=Sequence and Tone=Sequence: Related color.

MANUAL TRAINING.

There are three thirty-minute lessons in this month.

Free Expression.

Make original models.

SCHOOL DOCUMENT NO. 12-1919
BOSTON PUBLIC SCHOOLS

SPECIAL SYLLABUS DRAWING
AND MANUAL TRAINING

GRADES IV., V., VI., VII., VIII.



1919-1920

Adopted.

Attest:

IN SCHOOL COMMITTEE, June 16, 1919.

THORNTON D. APOLLONIO,
Secretary.

EQUIPMENTS.

Replenished in September on the basis of principals' reports for which blanks are furnished in March.

DRAWING.

Grades IV., V., VI., VII., VIII, IX.

ARTICLE.	Quota.
Water-color brushes.....	1 to each pupil.
Water-color boxes, long, with red, blue, yellow and black.....	1 to each pupil.
Water cups.....	1 to each pupil.
Pairs scissors, 6-inch (Grades VI. to VIII.).....	1 set to group.
In Grades IV. and V. use 6-inch manual training scissors.....	See Man. Tr.
Wooden rules (Grades VII., VIII).....	1 to 2 pupils.

MANUAL TRAINING.

Cardboard Construction.— Grade IV.

ARTICLE.	Quota. (To be Used in Sets, Each Set Shared by Two Classes.)
Pairs scissors, 6-inch (for Drawing also).....	1 to 2 pupils.
Rules, $\frac{1}{8}$ -inch.....	1 to 2 boys.
Triangles.....	1 to 2 boys.
Compass attachments.....	1 to 2 boys.
Conductor's punches.....	1 to 10 boys.
Trybom's "Cardboard Construction".....	1 to class.
"War Time Occupations".....	1 to class.

Bookbinding.— Grade V.

ARTICLE.	Quota. (To be Used in Sets, Each Set Shared by Two Classes.)
Pairs scissors, 6-inch (for Drawing also).....	1 to 2 pupils.
Rules, $\frac{1}{8}$ -inch.....	1 to 2 boys.
Triangles.....	1 to 2 boys.
Paste brushes.....	1 to 2 boys.
Eyelet punches.....	1 to 25 boys.
"Bookbinding for Beginners".....	1 to class.
"War Time Occupations".....	1 to class.

SUPPLIES.

Furnished in September on the basis of principals' reports for which blanks are issued in March. The amounts delivered plus any surpluses reported should equal quotas stated.

If supplies are not received by dates given, inquiry should be made of the master or assistant in charge. If it is found that they have not arrived in the district, inquiry should be made of the Supply Department. The quotas following have been carefully and generously revised, and, if supplies are distributed and used as indicated, there should be no necessity for further requisitions except in the cases where numbers prove larger than estimates or reports last sent in.

GRADE IV.

Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.....	1 to each pupil.
Cakes of color, yellow, red, blue and charcoal gray.....	1 each to each pupil.
Erasers.....	1 to 2 pupils.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.

Manual Training.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Gray twine.....	1 ball to 18 boys.
Pencils, Dixon's H.....	1 to each pupil.
Wrapping paper, 24-inch by 36-inch, light brown.....	1 sheet to each boy.
Bristol board, 22-inch by 28-inch, 3 colors.....	6 sheets to each boy.
Tubes of Adhezo.....	1 tube to 4 boys.

GRADE V.

Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.....	1 to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Cakes of color, red, blue, yellow and charcoal gray.....	1 each to each pupil.
Erasers.....	1 to 2 pupils.

Manual Training.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Needles, tapestry.....	1 paper to 25 boys.
Wrapping paper, 24-inch by 36-inch, light brown.....	1 sheet to each boy.
Newsboard, 13-inch by 19-inch.....	4 sheets to each boy.
Vellum de luxe, brown.....	1 yard to 2 boys.
Paper, Trimount Mills.....	1 ream to 25 boys.
Lining paper, brown, 20-inch by 26-inch.....	3 sheets to 2 boys.
Paste, powdered.....	1 pound to 20 boys.
Boxes of eyelets.....	1 box to 25 boys.
Balls macramé cord, brown.....	1 ball to 50 boys.
Cotton tape, $\frac{3}{4}$ -inch, white (4 yards).....	1 piece to 10 boys.
Bookbinders' thread.....	1 skein to 25 boys.
Yards "super".....	1 yard to 50 boys.
Oilcloth.....	1 yard to 10 boys.
Checkerboard paper.....	1 sheet to each boy.

GRADE VI.**Drawing.**

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.....	1 to each pupil.
Cakes of color, red, blue, yellow and charcoal gray.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.
"Elementary Lettering" sheets.....	1 to each pupil.
"Elementary Lettering" charts.....	1 to each class.

GRADE VII.**Drawing.**

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inc.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.....	1 to each pupil.
Cakes of color, red, blue, yellow and charcoal gray.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.
Compasses, Eagle No. 576.....	1 set to each building.

GRADES VIII. AND IX.
Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.	1 to each pupil.
Cakes of color, red, blue, yellow and charcoal gray.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.
Compasses, Eagle No. 576.	1 set to each group.

DRAWING. GRADES IV., V., VI., VII., VIII.

DESIGN.

Aim.

To have the children see and feel the difference between Order and Disorder, and appreciate the value and importance of Order; to develop the Love of Order and, so far as possible, the Sense of Beauty.

The beautiful is simply the best of its kind — the supreme instance which gives the standard. To recognize and discover it is one of the chief interests of a civilized life.

Subjects to be Considered.

- A. The impressions of Vision; of light, of color, of positions, directions, measures, proportions and shapes.
- B. The forms of Order as observed in Nature and in Works of Art.
- A. The Impressions of Vision.

First discriminations:

- I. Tones: Different effects of Light and Color.
 - a. Differences of Color; Red, Orange, Yellow, Green, Blue, Violet, and their intermediates; Violet-Red, Red-Orange, Orange-Yellow, Yellow-Green, Green-Blue, Blue-Violet.
 - b. Differences of Value in Colors: Colors light and colors dark; colors in different quantities of light.
 - c. Differences of Intensity in Colors: Colors bright, as in Spectrum Band, and colors dull; more or less neutralized, even completely neutralized.
- II. Positions.

Recognition of different positions in the Field of Vision, the principal position being the center of the Field of Vision.
- III. Directions:

Recognition of differences of direction in the Field of Vision: the Vertical; Up and Down; the Horizontal; Right and Left and the intermediate diagonal directions.
- IV. Measures:

Recognition of different measures (large and small), of different sizes, distances and intervals, as observed in the Field of Vision; the diameter of the Field being the principal measure to which the others may be referred.

V. Proportions:

The square gives the best standard of reference for Proportion; the height and width of the square being equal.

We have in different rectangles the simplest expression of Proportion.

VI. Shapes:

Recognition of differences of shape: Square, oblong, round, oval, etc.

The definition of all these differences (visual discriminations) by free-hand exercises in drawing and coloring: the exercises being carefully graded; the first being very simple and easy, preparing the pupil for those which follow, which should be increasingly difficult.

B. Order as observed in Nature and in Works of Art.

The three forms or modes of Order:

1. Continuations, Recurrences or Repetitions.
2. Progressions or Sequences: Different forms of motion.
3. Balances: Different forms of equilibrium or rest. To be appreciated, all balances must be set on the central vertical of the Field of Vision.

These three forms of Order occur in combinations, producing a great variety of phenomena, more or less interesting.

- a. Recurrences and Repetitions in Progressions and Sequences.
- b. Recurrences and Repetitions in Balances.
- c. Sequences in forms of Balance, and Balance in Sequences.
- d. Alternations in Sequences: that is, differences repeated, producing the effect of Rhythm.
- e. Gradations of differences set in Sequences or Progressions.
- f. The Balance of Repetitions and Inversions.
- g. The Balance of different elements which, though they do not correspond in character, are equivalent in their force of appeal in the Sense of Vision.

The Definition and Description of Order in particular instances and examples:

This is to be done in a carefully graded series of exercises in drawing and coloring. The first exercise should be very simple and elementary, the later ones increasingly difficult; from lesson to lesson and from grade to grade. By degrees the whole field of Design should be revealed, and its possibilities, in some measure, realized; beginning with the orders

of plane geometry, ending in the representation of Nature and Life in different geometric systems. As we have time systems in Music and in Poetry so we have space systems in Design. Order, Symmetry and Harmony are in all cases the expression of mathematical laws.

It is very important that the children should see good examples of design; in drawings and paintings, in textiles, in pottery and porcelain, in wood or stone carvings and in metal work. Drawings and paintings, photographs and enlargements of photographs and prints may be used and the children should from time to time be taken to the Natural History Museums and to the Museums of Art. On these occasions they should be encouraged to take notes of what they see that they believe to be beautiful. Tracing designs that interest them, with a finger in the air they will often be able to draw it on paper afterwards, making the same movements with the point of the pencil. They will not remember the design but the action describing it.

Habits.

Correct habits of sitting are essential to the child's health and sight.

The position used in writing is not good for drawing. The paper should be at the reading distance from the eye and so placed that the top and bottom edges appear horizontal and the sides vertical. So far as possible the paper should be at right angles with the direction of vision, not foreshortened.

REPRESENTATION.

Aim.

To develop visual discrimination, memory and imagination, together with an ability to describe visual experience and to express visual knowledge and ideas.

Subjects to be Considered and Represented.

Men, women and children, their attitudes, gestures and movements, their belongings and surroundings, in the city and in the country; care being taken to bring all the subjects suggested well within the experience of all the pupils, so that they will be describing what they have seen, and what they know, or ought to know, of Nature and Life.

Mode of Expression.

Drawing in definite outlines and coloring in flat tones. There is to be no modeling of solid forms either in Black-and-White or in

Color. The interest is to be in the Shapes of objects, people and things, and in the differences of color revealed in light.

Materials.

The drawing will be done with lead pencils; the coloring, at first with colored crayons, afterwards, in the more advanced grades, with water-colors.

Method of Teaching.

The teacher's part in this, as in all educational work, is to make the pupils think clearly and express themselves well. In this particular course the thinking must be in the terms of vision: Light, color, positions, directions, distances or measures, proportions and shapes. The knowledge and ideas to be expressed by drawing and coloring are in tone-relations and in space-relations. The terms of expression are lines and spots of color. The aim is to induce the pupils to think of Nature and Life in lines and spots of color and to put these lines and spots on paper; just as in other courses of study they think in words and forms of language, using the words in speech and in writing. The knowledge and ideas which are developed and expressed by lines and spots of color are hardly less important than those which are expressed by language. Many ideas which we try to express by speech and by writing can be much better expressed more definitely and more clearly by drawing and painting.

It will be the duty of the teachers in this course to suggest the subjects to be thought about and described; to help the pupils in the comparison, criticism and judgment of their own performances; and, finally, to grade the work done according to the standard to be maintained. The teacher is expected to take a genuine interest in the work of the pupils and to be quick to recognize and appreciate what is good in the work done; what is better, and what is best.

In suggesting subjects to be thought about and described by the pupils the teacher must be very specific and particular. For example, the teacher says: "A man is going out of the door when he remembers that his wife has not told him what to get for dinner. He turns round and calls her. She comes to the door with a little girl, four years old. They stand by the door talking. The little girl is interested in the cat which, seeing a dog across the street, has its fur raised and its back up. The house is built of red bricks. There are stone steps and the door and its jambs are painted white." By these words fairly definite

images are suggested and the pupils may proceed to draw and to color the subject, each one following his own imagination and producing his own picture. Taking up any one of the pictures produced it is a question whether it is true as a representation. In what respects is it true? What mistakes, if any, have been made? What changes or corrections should be made? Has anything been left out that is natural and proper to the picture as a whole, or to the people and things represented in it? In other words, is the performance appropriate to the idea which suggested it? Because in Art nothing counts that is unnatural, untimely or inappropriate. When the pictures have been considered and criticised, one after another, they should be put up to be considered together, with a view to making a comparison and selecting the best — the best of all or the best two or three. The children must be encouraged to make comparisons and to pass judgments. The teacher should assist them and encourage them, declaring her own judgment at the end of the lesson.

As to the standard to be maintained: It should be determined always by the best work produced in the grade; the better the work the higher the standard. With this idea in mind, the best work should be selected and kept for reference; and it will be well to have exhibitions of it from time to time. As the work improves, as it should from year to year, insignificant and unimportant examples may be thrown out. It is always the best that gives the standard. It is proper that the pupils should see what the standard is and for that reason exhibitions are held. No copying should be allowed. When the children have seen the exhibition it should be taken down, and they should then proceed, as before, to think for themselves and to express, each one, his own knowledge and his own ideas.

In the work of the nine grades there should be a steady increase of visual knowledge and of the power of expression which goes along with it. The crude representations of the primary grades must pass away and in the work of the higher grades we must see more and more truth of representation and the representation must be more and more specific and particular. If in the work of the primary grades we recognize the genus, we must presently recognize the species, then the varieties of each species. Last of all we reach the representation of particular people and particular things. Whenever the child is unable to think of anything to draw, that means that he has no visual knowledge appropriate

to the subject proposed. He must proceed at once to get the required knowledge. A simple way of doing this is to have the child look in Nature for the subject-matter to be represented; to get an idea of it. A good way of doing this is for the child to trace the objects, people or things in the air with the point of his finger. When he has done that he will remember, not the object, but his own action in describing it, and he will probably be able to do with the point of his pencil what he had done with the point of his finger, or something like that.

If the subject of the next lesson is given out before the children leave the room, they will be looking out for the people and things they will have to draw. The younger children can trace what they see with the finger and then draw it. The older children may be able to draw directly from the object, if it is in any sense still-life. In most cases, however, our visual knowledge is best secured by quick observation, followed by clear recollection or vivid imagination. Still-life is a very small part of Life and the art of drawing and painting in representation must not be limited to it, as it has been, very generally, during the past fifty years. In any case we should be able to imagine and draw the human figure in its principal attitudes and actions before we undertake anything like specific portraiture. The general idea, which is always a thing of the imagination, should take precedence over any specifications of it in the direction of matter-of-fact or statistical portraiture. We should be able to draw and paint men, women and children, and the objects connected with them, as the old masters did, before we proceed to direct imitation or copying. When the child reaches the end of the ninth grade of this teaching which we propose, and has come up to the standard required, he ought to be well prepared to take up the practice of drawing and painting in a professional school; particularly if he had done well in the practice of Design which has been going on at the same time. The motive of Representation, to achieve the truth of Representation, is not sufficient in itself; nor is the motive of Design self-sufficient, Design being the arrangement and composition of lines and spots of color to illustrate the mathematical principles of Order. The two motives must come together and work together; the ultimate aim being to present the Truth of Representation in forms which will be at least orderly and, so far as possible, beautiful.

It is very important that the children of all grades should see a great many photographs and pictures. By means of photographs and

pictures their visual experience and knowledge may be indefinitely increased, particularly if they make drawings from the photographs that interest them and from the pictures that please them. The photographs should represent facts and scenes of Nature and Life. Photographic reproductions of drawings and paintings by good masters should also be used. The half-tone pictures which appear in the daily and weekly papers and magazines will be of interest and serve the purpose in many ways. Photographs and pictures should be used as books are used, and referred to for information, as books are referred to. In drawing from the photographs or pictures the children should do what they will naturally and inevitably do if left to themselves. They must follow the outlines of the subject with the eye and the eye with the point of the pencil. In that way they will feel the sizes and the shapes together and draw them together; otherwise the drawing will be a matter of visual triangulation and construction, which is all right when the object is to arrange and state facts or ideas, but it is not the way to get visual knowledge and the power of imagination. We must have knowledge and ideas to express before we proceed to the Art of Arrangement and Composition.

DRAWING. GRADE IV.

DESIGN.

There are forty-eight exercises arranged for the year under the following topics, two forty-five minute periods each week until January 1 and one forty-five minute period each week from January 1 to June 16: Tones and Tone-Relations; Space-Relations; Balance; Sequences of Repetition, Alternation, and Progression. The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor.

Tones and Tone-Relations.

There are eighteen exercises in Tone-Study and Color Appreciation.

These lessons are to be divided between the various subjects according to the needs of the pupils. For additional exercises in the study of Tone-Relations see Sequences of Repetition, Alternation, Progression, and Balance. Definite periods should be allowed for practice in handling water-color material properly, preparatory to painting. Painting neutral gray in five values, white, light, middle, dark, and black, and learning to recognize and distinguish them from other values. Painting the six standard colors, red, orange, yellow, green, blue, and violet, full intensity. Painting neutralization scales, the above six colors neutralized to white and to black. Observation of color tones and tone-relations in Nature and Art and records of same written and painted.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

Study and draw the Circle, Square, and Oblong with diameters, and lines representing the directions, "up and down" (vertical), left and right (horizontal), and the angle of 90 degrees (the right-angle).

Draw the square with diagonals and lines representing the diagonal direction and angle of 45 degrees.

Draw the equilateral triangle and lines representing the diagonal direction and angle of 60 degrees.

Draw lines and angles representing the diagonal direction and angle of 30 degrees. (Bisection of the angle of 60 degrees.)

Note.—In the above exercises make many repetitions of the lines and angles named in order to visualize the directions clearly and to be able to produce them accurately.

Drawing (a) the Circle, (b) the Oblong, Square, and Equilateral Triangle by division of the circle into two, three, four, etc., parts.

Optional: An exercise in developing (within a 6-inch circle) the "square web" diagram in a sequence of progression of web sizes, 2-inch, 1-inch, $\frac{1}{2}$ -inch, and $\frac{1}{4}$ -inch.

Optional: An exercise in the repetition of the preceding "square web" diagram. Fill each square with a circle of corresponding diameter.

Note.— In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines and Areas or Mass. Free brush work may be included in the carrying out of these exercises.

Balance. (a) Axial. (b) Central.

There are seven lesson periods given to this series.

Axial Balance.

Central Balance.

Tone Balance (Black and White).

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Repetition. (a) In a row. (b) In a field.

There are five periods allowed for this series.

Exercises in Sequences of Repetition.

Exercises in Tone-Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— In each series make many different arrangements, varying the tone, measure, proportion, shape, attitude, or interval with each new arrangement. Free brush work upon webs may be included in the carrying out of these exercises.

Sequences of Alternation. (a) In a row. (b) In a field.

There are six periods allowed for this series.

Exercises in Sequences of Alternation.

Exercises in Color Sequences of Alternation.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Note.— Make many different arrangements in each series with the following changes in alternation: Tone, measure (size and number), proportion, shape, attitude, and interval. Sequences of Alternation are rhythmical. Free brush work may be included in the carrying out of these exercises.

Sequences of Progression. (a) In a row. (b) In a defined area. (c) In a field.

There are five periods allowed for this series.

Exercises in Sequences of Progression (in a row).

Exercises in Sequences of Progression of the square (in a given area).

Exercises in Sequences of Progression (in a field). Use a web for designs in a field.

Exercises in Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art. Free brush work may be included in the carrying out of these exercises.

Note.—The movement may be in measure or size from small to large or large to small, or more to less. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm, etc.

Lettering.

1 and 2. Practise making letters of the alphabet, studying them in groups as suggested by letter charts. Letter name and grade on drawing envelope.

JANUARY THROUGH JUNE.

REPRESENTATION.

Time.

There are twenty-two lessons in this series, one forty-five minute lesson each week.

January, 4 lessons.

February, 3 lessons.

March, 4 lessons.

April, 4 lessons.

May, 4 lessons.

June, 3 lessons.

Note.

The papers should be numbered 1, 2 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The interest for this grade centers about people indoors, bringing the figures nearer to the observer than out of doors. That means larger and more detailed drawings of people and things. Clothes, furniture, utensils, plants, animals, birds and other objects will be drawn in connection with the actions of people. The drawings should improve in arrangement, shapes and coloring as the children gain knowledge through observations, comparisons and their efforts in expression.

Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the

principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest. Try to make the sizes right according to the relative distances. In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Imaginative Drawing. (Two lessons.)

Illustrate an incident suggested by daily experience at home in the morning, *e. g.*:

Mother setting the table.

The baby in her high chair.

Children having breakfast.

In painting these pictures be sure that the coloring is appropriate to what is represented.

Note.— After each lesson invite the children to judge the drawings. In directed observation proceed as in science to study several individuals or pictures to learn general characteristics, not individual peculiarities. For example, study several heads to discover that the head is an oval, not a circle, that the eyes are half way down in the oval, not near the top where the children usually draw them.

Directed Observation. (Five lessons.)

Observe facts about people and furniture and make records of observation.

Collect and study photographs and pictures which show people indoors. Notice ways in which pictures tell the truth. Draw heads, front view and side view. Show correct placing of eyes, nose, mouth and ears. Show by arrangement of hair and by neckwear which are boys and which are girls.

Draw whole figures of people in front views and side views, and in different attitudes, appropriately dressed.

Study and draw furniture. Use two lines to represent thickness of tops, legs, braces, etc.

Draw chairs, tables, cabinets and other common furniture. Squared paper may be used in getting proportions and shapes.

Imaginative Drawing. (Five lessons.)

Draw and paint one or more pictures showing people in their homes in the evening, *e. g.*:

Children having supper.

Mother putting the children to bed.

Mother sewing.

A little girl feeding her pet bird.

Children playing a quiet game.

Father reading his paper.

Directed Observation. (Five lessons.)

Study proportion and grouping of people and furniture and make records of observations. Squared paper may be used in getting proportions and shapes.

Draw people sitting in chairs, front, side and back views. Draw dishes and other small objects, grouped on a table, shelf or tray.

Draw people and furniture in groups, *e. g.*:

Women standing behind a table, in front of a table, in front of a stove, near a book case, etc.

Color the best studies, using appropriate colors and contrasts.

Imaginative Drawing. (Five lessons.)

Illustrate incidents suggested by daily experiences at home, *e. g.*:

Mother reading to children or telling stories.

Children helping with the dishes or other work.

Saturday at home, indoor work and play.

DRAWING. GRADE V.

DESIGN.

There are forty-eight exercises arranged for the year under the following topics, two forty-five minute periods each week until January and one forty-five minute period each week from January 1 to June 16: Tones and Tone-Relations, Space-Relations, Balance, Sequences of Repetition, Alternation and Progression. The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor. It is desirable to review the subjects in color taken in the previous grade. This may be accomplished more readily if pupils refer to the color scales that were painted last year.

Tones and Tone-Relations.

There are sixteen exercises in Tone-Study and Color Appreciation.

For exercises in Tone-Relations see Sequences of Repetition, Alternation, Progression, etc.

Painting neutral gray in five standard values, white, light, middle, dark, and black, and learning to recognize and distinguish them from other values.

Color Relationship and Color Sequences, five steps each — orange to red, orange to yellow; green to blue, green to yellow; violet to red and violet to blue.

Painting neutralization scales, the intermediate colors, red-orange, orange-yellow, yellow-green, green-blue, blue-violet, neutralized to black and to white.

Observation of color tones and tone-relations in nature and art and records of same written and painted.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

Study and draw the Circle, Square, Oblong, and Equilateral Triangle, with diameters and diagonals, and lines representing the directions, up and down (vertical), right and left (horizontal), and the intermediate diagonals and angles of 45 degrees, 60 degrees and 30 degrees.

Draw the square with diameters and repeat in separate rows, series of parallel vertical lines, parallel horizontal lines, and angles of 90 degrees.

Draw the square with diagonals and repeating in a row a series of parallel diagonal lines (up to the right and down to the left), inclined at an angle of 45 degrees, and a row of angles of 45 degrees.

Draw the equilateral triangle and repeat in separate rows series of parallel diagonal lines up to the right, at an angle of 60 degrees, and also another series up to the right at an angle of 30 degrees, a row of angles converging at 60 degrees, and a row of angles converging at 30 degrees.

Note.— In the above exercises make many repetitions of the lines and angles named, in order to visualize the directions clearly and to be able to produce them accurately.

Draw (a) the Circle, (b) Oblongs, Square, Equilateral Triangle, the Pentagon, Hexagon, and Octagon by division of the circle into two, three, four, five, six, and eight equal parts.

An exercise in drawing within four-inch circles the progression of the hexagon.

Optional: An exercise in developing (within a six-inch circle) the "square web" diagram in a sequence of progression of web sizes, 2 inch, 1 inch, $\frac{1}{2}$ inch, $\frac{1}{4}$ inch. Fill each square with a circle of corresponding diameter.

Note.— In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass. Free brush work may be employed in carrying out these exercises.

Balance. (a) Axial. (b) Central.

There are seven lesson periods allowed for this series.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Repetition. (a) In a row. (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Repetition.

Exercises in Color Sequences of Repetition.

} Use a web for designs
} in a field.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, proportion, attitude, or interval with each new arrangement. Free brush work upon webs may be employed in carrying out these exercises.

Sequences of Alternation. (a) In a row. (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Alternation.

Exercises in Color Sequences of Alternation.

} Use a web for designs
} in a field.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Sequences of Alternation are rhythmical.

Note.— Free brush work may be included in carrying out these exercises.

Sequences of Progression. (a) In a row. (b) In a defined area.
(c) In a field.

There are five lesson periods allowed for this series.

Exercises in Sequences of Progression (in a row).

Exercises in Sequences of Progression of the hexagon (in an area).

Exercises in Sequences of Progression (in a field). Use a web for designs in a field.

Observation in Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure or size from small to large; large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short, short to long, etc. In tone it may be from light to dark or dark to light; bright to dull or dull

to bright; warm to cold or cold to warm, etc. Free brush work may be employed in these exercises.

Lettering.

- 1 and 2. Practise making letters of the alphabet, studying them in groups as suggested by letter charts. Letter name and grade on drawing envelope.

JANUARY THROUGH JUNE.

REPRESENTATION.

Time.

There are twenty-two lessons in this series, one forty-five minute lesson each week.

January, 4 lessons.

February, 3 lessons.

March, 4 lessons.

April, 4 lessons.

May, 4 lessons.

June, 3 lessons.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14.

The interest for this grade centers about people out of doors, in the street and in vehicles; in trolley cars, trains, boats, on teams and in automobiles. The drawings should improve in composition shapes and colors as the children gain knowledge through observation and the comparison of results.

A brief excursion by the class to gather necessary data concerning an object or a place will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest. Try to keep the sizes right according to the relative distances. Try to make the horizontal things appear to lie flat. In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea: the subject of the composition. Nothing should be introduced which is inappropriate to the subject or idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects, appropriate to the neighborhood, may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things, *e. g.*, a picture of a street car and a picture of a boat. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Illustrate an incident suggested by daily experience in the neighboring streets, *e. g.*:

People getting on or off a street car, train or boat.

People starting on a journey.

A family going to the beach.

Paint important parts of the picture to show interesting facts about color.

Directed Observation. (Five lessons.)

Observe facts about people and vehicles and make records of observations.

Collect and study street pictures in which people and vehicles furnish the theme. Notice ways in which pictures tell the truth.

Look at the vehicle chosen for study, *e. g.*, a trolley car.

Notice the proportion of one window as a key shape, the number of windows, and the space between windows. Draw from memory the row of windows. Think of the reason for so many windows.

Look at the doors, roof lines, and running gear of a trolley car. Finish the drawing of the car from memory.

Draw a group of people waiting to get on the car.

Paint the most important parts of the pictures, giving the different shapes characteristic and appropriate coloring.

Imaginative Drawing. (Five lessons.)

Illustrate an incident suggested by daily experiences in which a vehicle is important, *e. g.*:

Starting for the beach or park with the children.

A crowded car.

Trolley off, off the track, or a break-down.

Man helping woman and children off a car.

Directed Observation. (Five lessons.)

Choose either a boat or train for study. Draw first from memory and imagination. Discuss results.

Draw details of the vehicle chosen for study, thinking of the reasons for openings and spaces between.

Draw a person (man or woman) standing. Use the head as a unit of measure for the height of the figure.

Draw groups of people, the near figures first, then those partly hidden by the others. Introduce other objects of interest, so far as they are relevant or appropriate to the subject.

By painting indicate the coloring of objects and figures. Make the coloring appropriate and suitable.

Imaginative Drawing. (Five lessons.)

Illustrate an incident suggested by daily experiences in which a vehicle is important, *e. g.*:

“All aboard.”

Running for the boat or car.

“Just missed it” or “Just caught it.”

At the station or wharf to meet someone.

Draw appropriate groups of people and suggest surroundings.

Introduce animals, trees or other objects appropriate to the idea of the picture.

Indicate the coloring.

DRAWING. GRADE VI.

DESIGN.

There are fifty exercises arranged for the year under the following topics, two forty-five minute periods each week until January, one period each week from January 1 to June 16: Tones and Tone-Relations, Space-Relations, Balance, Sequences of Repetition, Alternation, and Progression.

The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor. It is desirable to review the subjects in color taken in the previous grade. This may be accomplished more readily if pupils refer to the color scales that were painted last year.

Tones and Tone-Relations.

There are eighteen lesson periods allowed for this series. For study of Tone-Relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

Optional: Exercises painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Optional: Exercises in painting each of the six colors, red, orange, yellow, green, blue, violet, full intensity with its corresponding value in the neutral scale.

Exercises in Tone-Sequences. Value scales — six standard colors, R., O., Y., G., B., V., neutralized to white and to black, arranged to correspond in value sequence with the neutral gray standard scale of nine values (including white and black).

Exercises in Tone Study: Full intensity and one-half intensity — of the six standard colors, R., O., Y., G., B., V. Select any color, full intensity, and paint a 2-inch square, circle, or oblong shape. Find its corresponding value in the neutral gray scale, and paint a second square. Mix this gray with the bright color or full intensity, diminishing the brightness to one half the original intensity without change of value. Arrange the three in a color sequence of bright to dull, full intensity, half-intensity, and neutral gray. All three should be alike in value.

Observation of color tones and tone-relations in nature and art and records of same written and painted.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

An exercise in the study and drawing of the Circle, Square, Oblong, and Equilateral Triangle, with diameters and diagonals, and of lines representing the directions, Vertical, Horizontal, and the Intermediate Diagonals inclined at angles of 45 degrees, 60 degrees, and 30 degrees.

An exercise in drawing the square with its diameters and diagonals and in repeating in separate rows series of lines of the following directions: Vertical, horizontal, and the diagonals inclined at angles of 45 degrees (up to the right and down to the left, and up to the left and down to the right). Make several repetitions in a row of angles of 90 degrees and 45 degrees.

An exercise in drawing the equilateral triangle and in repeating in separate rows series of lines of the direction of the diagonals inclined at 60 degrees and 30 degrees (up to the right and down to the left, and up to the left and down to the right). Make several repetitions in a row of angles of 60 degrees and 30 degrees.

Note.— Make many repetitions of the lines and angles named in order to visualize the directions clearly and to be able to produce them accurately.

Exercises in drawing (a) the circle, (b) oblongs, the square, equilateral triangle, the pentagon, hexagon, heptagon, and octagon, by division of the circle into two, three, four, five, six, seven, and eight parts.

An exercise in drawing within a 4-inch circle the progression of the circle, square, and octagon.

An exercise in developing within a 6-inch circle the "square web" diagram (a harmony of squares) in a sequence of progression of web sizes, 2-inch, 1-inch, $\frac{1}{2}$ -inch, and $\frac{1}{4}$ -inch. Fill each square with a circle of corresponding diameter.

An exercise in developing within a 6-inch circle the "triangular web" diagram (a harmony of equilateral triangles) in a sequence of progression of web sizes. Fill each oblong with an ellipse of corresponding diameters.

Note.— In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass. Free brush work may be included in carrying out these exercises.

Balance. (a) **Axial.** (b) **Central.**

There are seven lesson periods allowed for this series.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Repetition. (a) In a row. (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Repetition.	} Use a web for designs in a field.
Exercises in Color Sequences of Repetition.	

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, proportion, attitude, or interval with each new arrangement. Free brush work upon webs may be included in these exercises.

Sequences of Alternation. (a) In a row. (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Alternation.	} Use a web for designs in a field.
Exercises in Color Sequences of Progression.	

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art. Make many different arrangements in each series with the following changes in Alternation: Tone, measure (size and number), shape, proportions, attitude, and interval.

Sequences of Alternation are rhythmical. Free brush work upon webs may be included in these exercises.

Sequences of Progression. (a) In a row. (b) In a defined area. (c) In a field.

There are five lesson periods allowed for this series.

Exercises in Sequences of Progression (in a row).

Exercises in Sequences of Progression of triangles (in an area).

Exercises in Sequences of Progression (in a field). Use webs for design in a field.

Exercises in Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.—The movement may be in measure or size from small to large or large to small; more to less; in proportion from wide to narrow, narrow to wide; long to short or short to long, etc. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm. Free brush work may be included in these exercises.

Lettering.

1 and 2. Practise making letters of the alphabet, studying them in groups as suggested by letter charts. Letter name and grade on drawing envelope.

JANUARY THROUGH JUNE.

REPRESENTATION.

Time.

There are twenty-two lessons in this series, two forty-five minute lessons each week.

January, 4 lessons.

February, 3 lessons.

March, 4 lessons.

April, 4 lessons.

May, 4 lessons.

June, 3 lessons.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The

interest for this grade centers about people and details of buildings, especially doorways, gates and entrances. While the drawing of these things begins with the study of commonest facts of construction and proportion it lays a necessary foundation for appreciation of architecture which is emphasized in higher grades. The drawings should improve in shape and color as the children gain knowledge through observation and comparison of results.

A brief excursion by the class to gather necessary data concerning an object or a place will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat.

Whenever the principles of perspective are involved the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass. Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring, try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects appropriate to the neighborhood may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things, *e. g.*, a picture of a doorway and picture of a gate. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Illustrate an incident for which a door furnishes an appropriate setting, *e. g.*:

An agent or peddler comes to the door.

“Callers.”

Children playing on the doorstep.

To complete the picture indicate the coloring of the objects represented.

Directed Observation. (Five lessons.)

Observe facts about people and doors and make records of observation. Collect and study pictures in which people and doorways furnish the theme. Notice ways in which pictures tell the truth. Study and draw gates or other interesting entrances.

Make a careful drawing of a door, showing panels and door frame, sill, lintel, etc.

Draw a man standing in a doorway. Be careful to make the rectangle of the door the right proportion.

Draw a woman and a little girl standing in front of a door which is closed. Use paints to indicate appropriate colors of objects and figures.

Imaginative Drawing. (Five lessons.)

Illustrate an incident for which a door furnishes an appropriate setting, *e. g.*:

Sweeping the doorsteps.

Mother starts the children to school.

A boy and his dog waiting to be let in.

Girls playing with their dolls near the front door.

A messenger rings the front door bell.

The expressman leaves a package.

Directed Observation. (Five lessons.)

Look at a front door near the school with the idea of drawing it from memory. Make the memory drawing.

Take the drawing to the place where you made the observations, compare the drawing with the door. Make corrections from memory. Add shrubs, fences, steps and other objects near the door.

Imaginative Drawing. (Five lessons.)

Illustrate an incident for which a door or gate furnishes an appropriate setting, *e. g.*:

The school yard gate.

Watching a man paint the gate.

Opening the gate; swinging on the gate.

The green door or gate. The locked door or gate.

Playing under the tree near the gate.

The gate in the wall. Introduce animals and people.

Color every part of the picture to help tell the truth.

DRAWING. GRADE VII.

DESIGN.

Note.—The seventh grades in the Intermediate Schools should take as much of this course as the reduction in time allowance will permit. Drawing Supervisors will indicate in teachers' meetings what lessons to omit.

There are fifty exercises arranged for the year under the following topics, two forty-five minute periods each week until January 1. One period each week from January 1 to June 16: Tones and Tone-Relations, Space-Relations, Balance, Sequences of Repetition, Alternation and Progression. The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor.

Tones and Tone-Relations.

It is desirable to review the subjects in color taken in the previous grade. This may be accomplished more readily if the pupils refer to the color scales that were painted last year.

There are eighteen lesson periods allowed for this series. For Tone-Relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

Optional: Exercises in painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Exercises in painting each of the twelve colors, R., RO., O., OY., Y., YG., G., GB., B., BV., V., VR., full intensity, with its corresponding value in the neutral scale. The painting of the six standards is optional.

Exercises in Tone-Sequences: Value Scales. Six intermediate colors, RO., OY., YG., GB., BV., VR., neutralized to white and to black, arranged to correspond in value sequence with the neutral gray standard scale of nine values (including white and black).

Exercises in Tone-Study: Full intensity and one-half intensity of the six intermediate colors—RO., OY., YG., GB., BV., VR.

Select any color full intensity and paint a 2-inch square, circle, or oblong shape. Find its corresponding value in the neutral gray scale and paint a second square. Mix this gray with the bright color (full intensity), diminishing the brilliancy or purity to one half the original intensity, **without change of value**. Arrange the three color spots in a sequence,—bright or full intensity, half-intensity, and neutral gray. **All three should be alike in value.** Observation of color tones and tone-relations in nature and art and records of same written and painted.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

Study and draw the Circle, Square, Oblong, and Equilateral Triangle, with diameters and diagonals, and Lines, Vertical, Horizontal, and Diagonals inclined at angles of 45 degrees, 60 degrees, and 30 degrees.

Draw the square with its diameters and diagonals and repeat in separate rows series of lines, Vertical, Horizontal, and Diagonals, inclined at angles of 45 degrees (up to the right and down to the left, up to the left and down to the right). Make several repetitions in a row of angles of 90 degrees and of 45 degrees.

Draw the equilateral triangle and repeat in separate rows series of lines inclined at angles of 60 degrees and 30 degrees (up to the right and down to the left, and up to the left and down to the right). Make several repetitions in a row of angles of 60 degrees and of 30 degrees.

Note.—Make many repetitions of the lines and angles named in order to visualize the directions clearly and to be able to produce them accurately.

Draw (a) the Circle, (b) Oblongs, the Square, Equilateral Triangle, the Pentagon, Hexagon, Heptagon, Octagon, Decagon, and Duodecagon, by division of the circle into two, three, four, five, six, seven, eight, ten and twelve parts.

Optional: Draw within 4-inch circles progressions of the circle, square, and octagon, the equilateral triangle, circle, and hexagon.

Optional: Develop within a 6-inch circle the "square web" diagram (a harmony of squares) in a sequence of progression of web sizes, 2-inch, 1-inch, $\frac{1}{2}$ -inch, $\frac{1}{4}$ -inch. Fill two or three squares of each web section with circles of the same diameter and with octagons in the half-inch or 1-inch section, suggesting circular and octagonal "all over" patterns.

Optional: Develop within a 6-inch circle the "triangular web" diagram (a harmony of equilateral triangles) in a sequence of

progression of web sizes. Fill each oblong with an ellipse of corresponding diameters. If there is time, repeat the exercise or web series, filling each diamond from left to right with ellipses.

Note.—In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass. Free brush work may be included in carrying out these exercises.

Balance. (a) Axial. (b) Central.

There are seven lesson periods allowed for this series.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Repetition. (a) In a row (optional). (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Repetition.	} Use a web for designs in a field.
Exercises in Color Sequences of Repetition.	

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.—Make many different arrangements in each series, varying the tone, measure, proportion, shape, attitude, or interval with each new arrangement. Free brush work may be included in carrying out these exercises.

Sequences of Alternation. (a) In a row (optional.) (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Alternation.	} Use a web for designs in a field.
Exercises in Color Sequences of Progression.	

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Make many different arrangements in each series with the following changes in alternation: Tone, measure (size and number), shape, proportion, attitude and interval.

Sequences of alternation are rhythmical. Free brush work may be included in these exercises.

Lettering.

1 and 2. Practise making letters of the alphabet, studying them in groups as suggested by letter charts. Letter name and grade on drawing envelope.

Sequences of Progression. (a) In a row (optional). (b) In a defined area. (c) In a field.

There are five lesson periods allowed for this series.

Optional: Exercises in Sequences of Progression (in a row).

Exercises in Sequences of Progression of the Pentagon (in an area).

Exercises in Sequences of Progression (in a field). Use a web for designs in a field.

Exercises in Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure or size from small to large or large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short or short to long. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm. Free brush work may be employed in carrying out these exercises.

JANUARY THROUGH JUNE.

REPRESENTATION.

Time.

There are twenty-two lessons in this series, one forty-five minute lesson to each week.

January, 4 lessons.

April, 4 lessons.

February, 3 lessons.

May, 4 lessons.

March, 4 lessons.

June, 3 lessons.

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The interest of this grade centers about people and buildings. In studying facts about buildings it is hoped that the pupils will begin to appreciate some of the qualities of good architecture, such as the geometric construction and orderly arrangement of parts.

A brief excursion by the class to gather necessary visual data will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in a definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details.

It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat.

Whenever the principles of perspective are involved, the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass.

Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects of interest to the pupils may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Illustrate an incident for which a local building furnishes an appropriate setting, *e. g.*:

Crowd going to the movies. Going to school.

People in front of a store. Bargain day.

A crowd in front of the house across the street.

The concert hall.

To complete the picture indicate the coloring of the objects represented.

Directed Observation. (Five lessons.)

Select a building near the school for study. Choose if possible a colonial house, an historic building or a modern building which you think good. Choose a point of view and make first sketches of the building. If sketches cannot be made out of doors or from convenient windows make the observations from the chosen view point and draw from memory.

First sketches may be made on glass or on paper in the manner of tracing. Test for correctness as follows:

Positions of objects in relation to each other.

Directions of lines as compared with vertical center line.

Sizes of objects in relation to each other.

Sizes of object with regard to relative distances from the observer.

Shapes of objects as seen.

Proportions, as compared with a square.

Make study drawings of details, beginning with the most interesting part, as a door, window, or gateway. Squared paper may be used in getting proportions and shapes.

Imaginative Drawing. (Five lessons.)

Illustrate an incident involving a group of people for which a local building furnishes an appropriate setting. Make the people more important than the buildings.

Plan the arrangement of a group of people in front of the building. Draw the figures near the center first. Add others at the left and right and behind these to suggest a crowd or large group. Think of the distance of each figure from the observer and make the size right.

Draw the lines of the building as a background, farther away than the people. Keep the interesting features of the building near the center of the picture.

Study the coloring of the objects involved. Decide upon the colors to be used and paint every part of the picture.

Directed Observation. (Five lessons.)

Study a photograph or half-tone reproduction of a photograph in which buildings and people are represented. See newspaper prints and illustrations in geographies or magazines. Notice the contrasts of color which make things prominent.

Study and discuss the best available colored illustrations to understand the use of color in good pictures.

Select another building near the school for study. Make notes and sketches necessary to get a good idea of the shapes, proportions and colors involved.

Imaginative Drawing. (Five lessons.)

Draw a picture in which a building or group of buildings are important and the people are incidental. Center the interest about a door, window, gate or other architectural feature and use the people simply as accents. Color every part of the picture.

DRAWING. GRADE VIII.

DESIGN.

The eighth grades in the Intermediate Schools should take as much of this course as the reduction in time allowance will permit. Drawing Supervisors will indicate in teachers' meetings what lessons to omit.

There are fifty exercises arranged for the year under the following topics, two forty-five minute periods each week until January 1 and one

period each week from January 1 to June 16: Tones and Tone-Relations, Space-Relations, Balance, Sequences of Repetition, Alternation, and Progression. The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor.

It is desirable to review the subjects in color taken in the previous grade. This may be accomplished more readily if the pupils refer to the color scales that were painted last year.

Tones and Tone-Relations.

There are eighteen lesson periods allowed for this series.

For study of tone-relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

Optional: Exercises in painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Optional: Exercises in painting. Arrange each of the twelve colors full intensity opposite its corresponding value in the neutral value scale.

Optional: Exercises in painting **Value Scales** in twelve colors.

Exercises in painting **Intensity Scales** in twelve colors.

Observation of color tones and tone-relations in Nature and Art and records of same written and painted.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

Study and draw the Circle, Square, Oblong, and Equilateral Triangle, with diameters and diagonals, and lines Vertical, Horizontal, and the Diagonals inclined at angles of 45 degrees, 60 degrees, and 30 degrees.

Draw the square with its diameters and diagonals, and repeat in separate rows series of lines Vertical, Horizontal, and Diagonals inclined at angles of 45 degrees (up to the right and down to the left, up to the left and down to the right). Make several repetitions in a row of angles of 90 degrees and 45 degrees.

Draw the equilateral triangle and repeat in separate rows series of lines inclined at angles of 60 degrees and 30 degrees (up to the right and down to the left and up to the left and down to the right). Make several repetitions in a row of angles of 60 degrees and 30 degrees.

Note.—Make many repetitions of the lines and angles named in order to visualize the directions clearly and to be able to produce them accurately.

Draw (a) the Circle, (b) Oblongs, the Square, Equilateral Triangles, the Pentagon, Hexagon, Heptagon, Octagon, Decagon, and Duodecagon by division of the circle into two, three, four, five, six, seven, eight, ten, and twelve parts.

Draw within 4-inch circles progressions of the circle, square, and octagon, the equilateral triangle and circle and hexagon.

Optional: Develop within a 6-inch circle the "square web" diagram (a harmony of squares) in a sequence of progression of web sizes, 2-inch, 1-inch, $\frac{1}{2}$ -inch, and $\frac{1}{4}$ -inch.

Optional.

- (1) Draw the "square web" diagram in the $\frac{1}{2}$ -inch size within a 6-inch circle. Fill each square with a circle of corresponding diameter, making an "all over" pattern.
- (2) Fill each square with a lightly sketched circle of same diameter, from which develop an octagon, making an "all over" pattern.
- (3) Fill each square with a lightly sketched circle. From these develop an ogee curve "all over" pattern.

Note.—Strengthen the lines of the pattern developed, or emphasize it by tracing with colored crayon.

- (4) Develop within a 6-inch circle the "triangular web" diagram (a harmony of equilateral triangles) in a sequence of progression of web sizes. Fill each "diamond" from left to right with an ellipse, making an "all over" elliptical pattern.

Optional.

- (1) Repeat the "triangular web" in next to smallest size. Fill each oblong with an ellipse of corresponding diameters, making an "all over" pattern.
- (2) Repeat the web in the middle size within a 6-inch circle. Strengthen lines of the web to form an "all over" hexagonal pattern.
- (3) Repeat the "triangular web" in middle size. Fill each oblong with a lightly sketched ellipse. From these develop an elliptical ogee curve pattern. (See note under preceding exercise.)

Note.—In the following exercises the shapes may be lines (straight, curved, or angular), Outlines, and Areas or Mass. Free brush work may be employed in carrying out these exercises.

Balance. (a) Axial. (b) Central.

There are seven lesson periods allowed for this series.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Repetition. (a) In a row (optional). (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Repetition.

Exercises in Color Sequences of Repetition.

} Use a web for designs
} in a field.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, attitude, or interval with each new arrangement.

Sequences of Alternation. (a) In a row (optional). (b) In a field.

There are six lesson periods allowed for this series.

Exercises in Sequences of Alternation.

Exercises in Color Sequences of Progression.

} Use a web for designs
} in a field.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Make many different arrangements in each series, with the following changes in alternation: Tone, measure (size, number), shape, proportion, attitude, and interval. Free brush work may be employed in carrying out these exercises.

Sequences of Alternation are rhythmical.

Sequences of Progression. (a) In a row (optional). (b) In a defined area. (c) In a field.

There are five lesson periods allowed for this series.

Optional: Exercises in Sequences of Progression (in a row).

Exercises in Sequences of Progression of the octagon (in an area).

Exercises in Sequences of Progression (in a field).

} Use a web for designs
} in a field.

Exercises in Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure of size, from small to large or large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short or short to long; in tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm.

Free brush work may be employed in these exercises.

Lettering.

1 and 2. Practise making letters of the alphabet, studying groups as suggested by Letter Charts. Letter name and grade on drawing envelope.

JANUARY THROUGH JUNE.

REPRESENTATION.

Time.

There are twenty-two lessons in this series, one forty-five minute lesson each week.

January, 4 lessons.

April, 4 lessons.

February, 3 lessons.

May, 4 lessons.

March, 4 lessons.

June, 3 lessons.

Note.

See general note on Representation, pages 10, 11, 12, 13, 14.

The interest of this grade centers about architectural and landscape interest, with emphasis on beauty of shape and color.

A brief excursion by the class or by an individual to gather necessary data for the pictures will help more than much discussion or vague supposition as to how things look. An appreciation of order and a sense of beauty should form increasingly important results of the pupils' observations. The lessons in design should help to explain the geometric construction and systems of order in architecture.

Visual memory and the power of imagination will be greatly strengthened if observations are made in a definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat. Whenever the principles of perspective are involved the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass. Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring try to keep the center of interest important by contrast of color: light, dark or neutral. Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons, the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects of interest to the

pupils may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things. When an option is given, one subject should be agreed upon for the class.

Imaginative Drawing.—(Two lessons.)

Draw from memory or imagination a picture of a place which you consider beautiful or picturesque.

Paint every part of the picture.

Directed Observation. (Five lessons.)

Select a group of buildings or a bit of landscape near the school for study. Choose if possible a colonial house, a historic building, a bridge, a tower or a modern building which you think good, a tree or group of trees, a bit of the river or harbor, or nearby park. Choose a definite point of view and make first sketches. If sketches cannot be made out of doors or from convenient windows, make the observations from the chosen view point and draw from memory.

First sketches may be made on glass or on paper in the manner of tracing. Perspective may be readily understood in this way.

Test for correctness as follows:

Positions of objects in relation to each other.

Directions of lines as compared with vertical center line.

Sizes of objects in relation to each other.

Sizes of objects with regard to relative distances from the observer.

Shapes of objects as seen.

Proportions, as compared with a square or some other basic rectangle.

Squared paper may be used in getting proportions and shapes.

Make study drawings of details of objects included in the picture, beginning with the most interesting part.

Drawing from Memory and Imagination. (Five lessons.)

Make a picture in which the center of interest is the object or vista chosen for study. Try to keep the parts of the picture consistent so that nothing interferes with the central idea.

Paint the picture so that the colors help to express the idea. Compare and discuss results.

Directed Observation. (Five lessons.)

Study a photograph or half-tone reproduction of a photograph in which buildings, landscapes, and people are represented. See newspaper prints and illustrations in geographies or magazines.

Study the best available colored illustrations or Japanese prints to understand the use of color in good pictures. Copy freely with a brush and color any parts of special interest. Choose another subject which suggests a good picture. Study it as before, making sketches and any necessary notes.

Drawing from Memory and Imagination. (Five lessons.)

Make a picture in which the center of interest is the object chosen. Draw and color every part of the picture, trying to present a good idea as clearly and beautifully as possible.

Compare and discuss results.

MANUAL TRAINING. GRADE IV.

CARDBOARD CONSTRUCTION.

Two one-hour lessons a week are allowed for this work.

Aims.

1. To acquaint the pupils with plain lettering and the simplest conventions of the working drawing.
2. To develop some accuracy in the use of the pencil, rule, triangle, compasses and scissors.
3. To lead to the appreciation of a few fundamental principles of construction applicable to sheet metal and wood.
4. To inculcate good ideas of simple design in (a) borders, (b) contours, (c) space division.
5. To develop individual initiative, especially during the latter part of the year.
6. To promote coöperative effort.

Means.

1. Lettering on drawings and on finished problems.
2. Making simple working drawings.
3. Constructing simple geometric figures, boxes, trays, furniture and mechanical devices.
4. (a) Decorating with simple borders, (b) cutting templets for modification of rectangles and for parts of furniture, (c) placing sandpaper and pictures on mounts.
5. Deciding questions of size, proportions, contour and decoration in some of the later problems.
6. Working in groups on different objects of a set, and on different parts of one object.

Minimum Requirements.

To letter one's own name well.

To draw and dimension correctly a rectangle, a circle, a hexagon, and a few developments.

To construct from such drawings articles of familiar use.

To measure and lay off with rule graduated to eighths of an inch.

To use scissors, compasses and triangles correctly.

To apply one border, to cut and use one acceptable templet, to mount one rectangle.

To assist in working out a group project.

To construct a mechanical device, individually or in a group.

General Directions.

1. Before beginning the drawing of each model, present the finished object and discuss its shape and utility with a view to creating all possible interest in it.

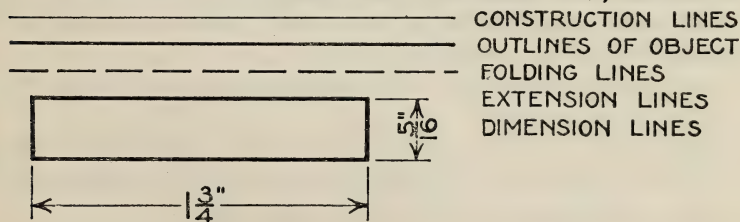
2. **Distribution of Equipment.**— The problem of prompt distribution and collection of equipment should receive careful consideration. With a little system five minutes should be ample time.

3. **Blackboard Work.**— Each teacher should have a blackboard rule, triangle and compass, which can be secured from the master. The rule, if not graduated, should be sent to the manual training teacher, who will properly mark it if requested.

In placing work on the board, draw roughly a rectangle, the irregular outline of which will represent the torn edges of the cardboard. Draw as you wish the children to draw, using the same tools and working to scale. Use all the conventions properly, and make careful distinction between construction, extension, dimension, folding and cutting lines. The work on the board should generally precede that of the pupils, a line at a time in the first half-year, and follow rather than precede in the last half. The dictation of measurements should be immediately supplemented by the proper placing of the dimensions on the drawing. Be careful in your conversation to use accurately the nomenclature of the subject.

4. **Drawing.**— Use the special hard pencils furnished for this work. Compass attachments may be used thereon. Insist on light lines and small dots. In the use of the triangle it may be found well in erecting perpendiculars to place the inner edge on the line and the outer edge at the point. All lines should be drawn longer than required dimensions,

CONVENTIONS FOR WORKING DRAWINGS, GR. IV-V



and these dimensions should then be laid off on the lines. Avoid the use of the term *measure* when *lay off* is meant. Do not allow the boys to mark on the rules. Impress upon them at the outset that measurements are spaces, not lines, and encourage them to use the middle portion of the rules instead of the ends. Use special rules provided, with blank ends,

unless better ones are available. If the thick edge of the rule is used for laying off distances, the rule should stand upon that edge. (See, also, page 10, Trybom's "Cardboard Construction," "Drawing.")

5. Lettering.—Teach forms of letters by groups which should be placed on the blackboard as shown on Plate I. For the first seven weeks at least devote about fifteen minutes of each week to lettering. Throughout the year insist upon careful lettering, plain capitals ("upper case") only to be used.

6. Cutting.—Care is necessary at first to see that pupils hold the shears properly, a simple matter frequently overlooked.

Left-handed pupils should be encouraged to cut with right hand, as shears are made "right-handed." In the beginning specific directions should generally be given for the cutting of each line. Have cardboard held in the left hand and cut on the right side of the object. Begin to cut near the joint of the shears, making as long cuts as possible, but not closing the shears. Cut past corners where possible instead of attempting to make sharp turns. In cutting long lines the hand should be below the cardboard.

7. Scoring.—This may wisely be done, beginning with the first folding model. The shears, a pocket knife or a pin may be used. Score on working side and bend so as to leave drawing on outside. This makes a desirable demand on the pupils for careful and neat drawing.

8. Punching.—Allow each child to punch his own work.

9. Tying.—To get a number of equal lengths of twine, wind around book and cut.

10. Disposition of Completed Work.—It is desired that work be kept for the inspection of the assistant in manual arts as follows:

1. A full set of the last model made.
2. A full set of the last working drawing made.
3. One or two specimens of each model and each drawing made since the last visit of the assistant.
4. Several examples of any work correlating with drawing or other subjects, outlined or original.

Otherwise it is recommended that, with the permission of the principal, the work be returned to the children soon after its completion, but not at the end of the lesson in which it is completed.

Methods.

Much of the value of the training and the quality of the results depends upon the methods employed by the teacher. Not only should she be familiar with the finished product but with the best methods of

producing it. Suggestions given under general directions should be carefully noted and special attention given to correct methods. In the earlier lessons a certain amount of dictation is necessary; care should be taken, however, that the dictation is entirely clear and logical, and that the following is exact.

As soon as possible the class should be questioned concerning the work at hand, and when feasible several pupils sent to the blackboard to work out with the help of the class the problems which later is to be done by individuals at their desks, under the direction of the teacher. This independence of thought should be guided toward the original work which is to come later.

SEPTEMBER.

FIRST WEEK.

Triangles. Read General Directions 1, 2, 3, 4, 6 and 10.

On top of a sheet of drawing paper have each pupil draw two light guide lines about $\frac{1}{4}$ of an inch apart. This space may be secured by standing the rule up on the thick edge and drawing against the two faces with the pencil held vertically. Between these lines each boy should letter his own name to the best of his ability, using only capitals. This incidentally establishes the top of the sheet.

Have each pupil observe the wooden triangle, giving special attention to its right angle. Some of them will know that this angle is sometimes called a "square corner."

Near the bottom of the sheet have a line drawn from edge to edge and three points laid off on the line, the first one 1 inch from the left edge of the paper, the next 4 inches from it to the right, and the third 4 inches farther to the right. At the left point have a perpendicular erected by means of the wooden triangle. On these lines which form a right angle have 2 inches laid off and the triangle completed. At the center point have an angle drawn smaller than a right angle by placing the "square corner" of the wooden triangle at the point, but with its lower edge extending below the horizontal line. From this angle lay off 2 inches on each adjacent line and complete the triangle. At the right point have an angle drawn larger than a right angle, using the wooden triangle with its lower edge extending above the line. Complete this triangle in the same manner as the previous one. Interest in right-angled triangles will be increased by having the pupil discover those to be found in the room.

SECOND WEEK.

Mounting Triangles.

Have at least one right-angled triangle cut from cardboard and mounted on paper. If time permits, others with varying lengths of sides may be drawn and cut. In mounting they may serve as tents, roofs of houses, sails of boats, etc., other parts to be drawn with pencil or crayon.

In the upper right corner of the sheet just made, have each pupil letter his own name. (See General Directions, 5.)

On all following articles and drawings have each child letter his name and when instructive the name of the object.

Lettering.

Teach the first group (see Plate I.), aiming to secure good verticals and horizontals. In teaching all groups the letters should be placed between horizontal lines as well as balanced on the verticals.

THIRD WEEK.

Rectangles.

Several rectangles should be shown to the class, each designed for a different purpose, such as bookmark, label, tag, mount or postcard. Have the class decide which they will make and determine good proportions and size for the same. Working drawings must be made and used as guides in constructing the rectangles of cardboard. No details or decoration should be attempted on the working drawings. Leave these to be made on the bristol board. Aim to secure accuracy of measurement and correctness of dimensioning.

Have several, if not all pupils, work at the blackboard drawing rectangles, and correctly dimensioning them. Class criticisms should follow.

Lettering.

Teach the second group, having it drawn on a vertical line with good modifications of the basic "O."

OCTOBER.

NOTE.—Page numbers in the following directions refer to Trybom's "Cardboard Construction."

FIRST WEEK.

Circular Card.

Before making circular card ask each child to choose what his circle is to represent, whether a target, alternate rings to be filled in with

pencil or crayon, a mariner's compass, a clock face properly marked out and lettered, or any other article of circular shape.

Give each child a sheet of drawing paper and compasses. Allow each pupil to experiment with compasses and to draw on the paper several circles of different radii; then have him decide upon the one best suited to his purpose. Teach correct way to dimension this circle. In connection with this lesson have some blackboard work, following suggestions made for rectangle.

Have constructed and cut from cardboard a card of the size indicated by the drawing, with lines and lettering added as previously decided upon. The best method of cutting a circle should be shown to the class and insisted upon.

Lettering. Teach the third group.

SECOND AND THIRD WEEKS.

Hexagonal Card. (Page 18.)

Have working drawings of hexagon made on paper. Have drawings dimensioned. Require the pupils to make the hexagon (preferably at a subsequent lesson), working from their own drawings. Show photographs of snowflakes furnished for drawing lesson and call attention to their hexagonal shape.

In connection with star, review triangles and hexagons by asking pupils to recognize the various forms into which the star is divided by the construction lines.

Lettering. Teach the fourth group.

Lettering. Teach the fifth group.

FOURTH WEEK.

Bookmark. (Page 26.)

On wrapping paper have a rectangle 2 inches by 4 inches drawn and placed with long edges horizontal. Show how the lower line may be bisected with the compasses. Have the rectangle cut out and the two upper corners folded to central point on the lower edge, and folds creased very hard. Holes should be punched in these corners for tying them together. Teach the bow and square knots. A piece of stout cord is useful for illustration.

Lettering.

Teach the sixth group and spacing. Notice that horizontal divisions should be about two fifths down from upper guide line.

NOVEMBER.

FIRST WEEK.

Envelope.

(See "War Time Occupations," pages 18–21.)

Have no working drawings made by pupils but have them work from drawing placed on blackboard by the teacher.

Emphasize the use of the triangle in construction. Call attention to the small rectangles which make up the envelope.

Lettering.

Teach the seventh group. Notice that horizontal divisions should be about two fifths up from lower guide line.

SECOND WEEK.

"Tangram" or "T Puzzle."

(See "War Time Occupations," pages 21–23.)

Have no working drawings made by pupils but have them work from drawing placed on blackboard by the teacher.

THIRD AND FOURTH WEEKS.

Candy Basket.

Present a completed basket and have several pupils work out its development at the blackboard and later have all pupils make a dimensioned drawing on paper. The finished drawing will resemble that on page 31 but should be constructed by a different method. Have drawn two concentric circles with radii of $1\frac{1}{4}$ and $2\frac{3}{4}$ inches respectively. Have these dimensioned. Across these circles have two diameters drawn at right angles to each other. The intersection of the diameters with the circumference of the inner circle should be connected to form the square base. Taking successively each end of the two diameters as a center have $\frac{3}{4}$ of an inch laid off in both directions on the outer circumference and these points connected with the corners of the square base. At one place only have the length of this radius properly indicated. Have baskets laid out on cardboard, cut, scored, folded and tied at the corners.

DECEMBER.

FIRST WEEK.

Candle Shade. (Page 32.)

Present candle shade and discuss its shape (conical surface) and dimensions in its completed form. Spread it out and discuss shape of the development (semicircle).

Review characteristics of the circle and note the concentric arcs.

Have working drawings made on paper and require pupils to make the model (preferably at a subsequent lesson), working from their own drawings, the blackboard drawing having been erased.

Before the cutting is done have a border consisting of a simple band, applied with crayon. Complete by punching holes and tying.

SECOND AND THIRD WEEKS.

Rectangular Box. Read General Directions 7, 8 and 9.

This box should be not larger than 4 inches by $2\frac{1}{2}$ inches for the base and cover, with sides $\frac{3}{4}$ of an inch or an inch in height. The development should be in one piece, having the cover attached to a long side and without laps.

In presenting the box, discuss its shape and dimensions in its completed form. Spread it out and have some pupils at blackboard and others at desks working out its development. Follow this with careful drawings of development only made on paper. Do not ask pupils to put on dimensions. The teacher, however, should place them on her blackboard drawing to serve as a guide for the pupils to make the model at a subsequent lesson. Holes should be punched and the box completed by tying at the corner.

When the box is completed have the class consider its fundamental character and show how with a few changes or additions it could be made into a cart, table, bench, etc.

JANUARY.

FIRST WEEK.

Original Work.

The object of this lesson is to interest and encourage the children in constructing articles of their own conception; some of the work may be done at home and some at school. Specimens of work from last year should be shown and a conversational lesson should follow, during which any pupils who have ideas should be encouraged to express them. Articles suggested by history, geography, or reading lessons are desirable; also those which may be observed in surrounding life.

The tangible results of this week's work may be small, but the teacher should be satisfied with arousing an interest in original planning and construction, the value of which shall be shown in later products.

Do not hesitate to make suitable suggestions as to construction, proportion of parts, materials, etc. The happiest results are those where teacher and pupils have planned together, and where the finished products have been developed from several minds.

Materials in general should be those that the boy can procure for himself, not alone to prevent undue encroachment on school supplies, but also for the far more educational reason of inducing self-reliance and the utilization of materials at hand. Pasteboard boxes, wire, brads, screws, paper fasteners are desirable accessories. Thin wood from egg, fruit, or cigar boxes is easily obtained and is a satisfactory material. This work at first should be voluntary, but it should be directed toward a satisfactory completion of the lessons outlined for May and June.

There is no objection to home assistance provided it is honestly acknowledged by the boy. A few suggestions from some one at home may assist the boy very much, but the finished article should be child's work, not adult's work in which the child has taken a minor part.

Encourage the pupils to bring in at each lesson, throughout the remainder of the year, any original work done outside. This should be exhibited to the class and the thought commended even though the work be crude. Some of the mechanical toys in the market are very suggestive. Ideas may also be obtained from many of the current magazines, such as "Something-to-do," "Popular Mechanics," etc.

The following volumes, which have been used successfully by pupils of various schools, may be found in some of the branch libraries:

"Toy Making in School and Home,"

B. K. and M. I. B. Polkinghorne.

"Home Made Toys,"

William Hall.

"Boys' Make-at-home Things,"

Carolyn Sherwin Bailey.

It is not necessary that this lesson be extended through the two hours allowed. Any time remaining may be used for the completion of unfinished work, or for beginning the next problem.

SECOND WEEK.

Match Scratcher. (Original Design.)

Treat the match scratcher as a problem in design. From the manual training teacher obtain a sheet of No. 1 or $\frac{1}{2}$ sandpaper which

should be cut into long narrow strips of suitable size and distributed. Have each child place his sandpaper on a piece of paper, and plan a rectangle of suitable proportions for the mount. Have working drawing made of rectangle only, without modifications. Let pupils experiment individually in making modifications of the top of this rectangle. To accomplish this each child should have a piece of paper of same width as rectangle above referred to, but much longer. This should be folded with long edges together and the top cut in a simple curve, avoiding corners, abrupt turns and complicated curves. Have this top cut off and placed on desk for a sample. Several different tops should be so made and cut off. When satisfactory results are obtained, have rectangle constructed on cardboard with top traced from selected pattern, and then cut out, sandpaper pasted on, and a hole punched to complete the model.

THIRD WEEK.

Paper Bag.

Make the bag and present it in its completed state with other bags to the class. On a piece of wrapping paper have each pupil lay out a rectangle 9 inches by 15 inches and cut it out. On each long edge have points located 5 and 6 inches, respectively, from one short edge. Have short edges carefully folded to farthest points and resultant folds well creased, producing a lap which should then be pasted.

At each open end have a point located 2 inches from one fold. Have the bag opened and a crease made connecting these points; now have the bag flattened to make the opposite crease. Between each pair of creases have a reverse crease made by folding the pair together. On the jointed face, 1 inch from and parallel to one open end, have a line drawn; the small rectangle formed by this line and the folds should be cut from one broad face. The remaining portions below this line should be folded over and pasted to close the bottom. If desired the upper edge may be "pinked" (cut in points).

FOURTH WEEK.

Model of Great Pyramid.

NOTE.—This pyramid was built by Kheops, who called it "Khuit," meaning "Horizon." Kheops so named it, as he was going to rest in it, as his father, the sun, was accustomed to set in the horizon.

The height of the pyramid was originally about 480 feet, with a square base about 750 feet on a side and an edge of about 715 feet. The models resulting from this lesson will be about 1-2000 size, as nearly as the necessity for even fractions of an inch will permit.

Present a finished model and discuss shape of faces, etc. (See Geographies, King's Elementary, page 190, Tarbell's Introductory, page 176, and Redway and Hinman's New, page 133.) Have development worked out on paper, each isosceles triangle to have base of $4\frac{1}{2}$ inches and sides of $4\frac{1}{4}$ inches. The simplest method of drawing this development is to strike about three fourths of the circumference of a circle of $4\frac{1}{4}$ inches radius; to lay off, on this arc, five points, $4\frac{1}{2}$ inches apart, and to connect these points with each other and with the center of the circular arc. The base should be omitted. Have proper laps and dimension lines added. Have models made from these drawings.

Or

Square Lamp Shade.

Present a finished shade and discuss the similarity between it and the pyramid. The size may be varied. Have development worked out on paper. This should consist of two concentric circles, the radius of outside circle to be not more than 6 inches and that of the inside circle about one third as large. The outer circumference should then be divided into six equal parts and these points connected with center. Have outer and inner circles cut out, and also one sector. If straight edges are preferred, cuts should be made on straight lines drawn between points on both outer and inner circumferences. A simple border parallel to the edge should be applied but not until after the study of borders is completed in the drawing lessons. Then have pupils score and fold on all radii, after which one end section should be pasted over the other.

FEBRUARY.

FIRST WEEK.

Mount.

Have planned a rectangular mount for a picture or calendar, and a narrow strip to serve as a support. On this strip one half inch from and parallel to one short side have a line drawn across and scored. The small rectangle formed by this line should be pasted to the back of the mount. The remainder of the strip to form a stand-

ard. In this lesson special attention should be paid to the working drawings of the rectangles and a careful well lettered sheet should be insisted upon.

SECOND AND THIRD WEEKS.

Box with Cover (page 57, Trybom's "Cardboard Construction").

Present a finished box to the class and have several pupils draw on the blackboard developments of both box and cover, together with the necessary laps. Later all pupils should draw these developments on paper but without dimensions. On her own blackboard drawing the teacher should properly place the dimensions. Have pupils read these for the measurements of their own drawings. Have the cover $\frac{1}{8}$ of an inch larger than the box instead of $\frac{1}{16}$ of an inch as given in the book.

MARCH.

FIRST AND SECOND WEEKS.

Handkerchief Box.

This box is similar to the one which precedes it, having a base $4\frac{1}{2}$ inches square with sides $1\frac{1}{2}$ inches high, and a cover $4\frac{5}{8}$ inches square with sides 1 inch high.

Present a finished box to the class and have several pupils draw on the blackboard developments of both box and cover, together with the necessary laps and dimensions. Have accurate working drawings made on paper and from these at a subsequent lesson the boxes should be laid out on cardboard, cut, scored, folded and pasted.

The covers may be decorated with designs resulting from drawing lessons; in case this is done have designs applied with crayon before pasting.

THIRD AND FOURTH WEEKS.

Table. (Individual design.)

Treat this model as a problem in development and design. Present one or more completed models to the class, and, by means of blackboard sketches, have development of parts worked out.

An oblong top should be planned not to exceed 5 inches in length.

Have height of table decided upon, and a rectangle drawn whose width equals this height and whose length is indefinite. On this rectangle, have four sides marked off — two long and two short.

To this have laps added at one end and at the upper edge of each side for attachment to the top of the table. On each side of the vertical dividing lines have width of legs (about $\frac{1}{4}$ inch) marked off; have a horizontal line drawn parallel to upper edge a short distance below it to form a top rail. Have the whole rectangle cut to form legs and rails as indicated and the end laps pasted. Have drawn another rectangle of proper size to fit the space exactly. This should then be cut and pasted to the under side of the top laps. This secures the rectangular shape of the support and strengthens the table. The visible top, which should have more overhang at the ends than at the sides, should now be laid out, cut and pasted. While this is drying it is well to lay a small book on the top to prevent curling or pulling away.

APRIL.

FIRST AND SECOND WEEKS.

Cylinder.

This lesson is a problem in the development of cylindrical objects such as the round box on page 54, and should illustrate the adaptability of sheet materials (tin, zinc, cardboard) to such forms. The following suggestions illustrate some of the modifications which should be substituted for the typical cylinder. By turning over the box already referred to and adding a handle to the top it becomes a model of a cookie cutter; by altering its proportions and adding a handle to the side it becomes the model of a measuring or drinking cup; by adding a handle to the open end it becomes the model of a pail; by altering the proportions again and adding square bases it becomes a column or pedestal, and admirably shows the strength of sheet material so treated. Attention should also be called to such objects as ink fillers, funnels, etc.

Before having any work done with cardboard, call attention to the "grain." A little experimenting shows that the cardboard rolls easily in one direction, while in the other direction there is resistance, causing the cardboard to break. In cutting cardboard which is to be used for a curved surface this characteristic should be considered. When two pieces are to be pasted together as in the base of a cylinder, if the grain of one is placed at right angles to that of the other there is equal stiffness in both directions and less tendency to curl.

The development of a cylinder consists of two circles and a rectangle; the dimensions of the latter are: in one direction the height of the cylinder, and in the other the circumference of the circle. On cardboard have drawn a circle of a given diameter, and a rectangle whose width is equal to height of contemplated cylinder and whose length is more than long enough to fold around the circle and lap over. On the side of the rectangle to which the circular base is to be attached have a quarter inch lap drawn. When all pieces have been cut have this lap scored and cut in points; then have rectangle wrapped closely around the base and a pencil mark drawn to indicate how far one end laps over the other. Using a rule have a line drawn from this mark across the cardboard to show the width of the lap. Do not allow scoring on this line. If the lap is more than a quarter of an inch have additional length cut off. Call attention to the fact that the distance around the circle is a little more than three times its diameter. Have this proved by measuring with the rules.

When the rectangle has been pasted into cylindrical form have the circle pasted on the inside; then have a second circle drawn the width of a pencil line larger than the first circle, and cut and pasted outside. Have cylinder completed by the addition of a handle, cover, or other modification.

THIRD WEEK.

Group Project.

Encourage the production of models of simple and familiar articles of furniture, such as bureaus, desks, beds, stands, cradles, tabourets, chairs, etc. Plan the work so that the different articles will be related to each other in size and purpose; and, while not introducing the use of actual scale, see that it is felt by the class. Satisfactory articles should be retained from one year to the next and used as suggestive material. Encourage original thought but do not demand it. The first suggestions should come from the teacher.

In making furniture of cardboard have it based on such rectangular construction as already indicated for the table. The four sides should be laid off on one strip of cardboard with a lap at one end for joining. Laps should also be placed along the upper edge of each face to which a top may be pasted. The proportion of these sides may be varied to accord with the article it is desired to make. Modifications of the sides by cutting (such as legs for a table) or drawing (such as panels for a desk) or by both

(such as cutting legs for a sideboard and drawing the compartments) should be carefully planned and executed. Tops of tables and stools should have an overhang on all four sides; those of desks, sideboards, bureaus, cabinets, chairs, etc., on three sides only, that is, having no overhang at the back. Cylindrical construction may also be used either separately or in connection with rectangular construction.

From the finished products one or more sets of toy furniture should be obtained. These are more effective if assembled as in a room, perhaps using a box placed on its side for the room, or placing the furniture on a "rug" made in the drawing lessons.

MAY.

FIRST AND SECOND WEEKS.

Group Project. Complete.

THIRD AND FOURTH WEEKS.

Mechanical Device.

Many children will have already constructed mechanical devices in their "home work" (See January, Fourth Week) and the success of this lesson depends largely on such previous work. This should be displayed to the class and used as suggestive material. It is not necessary that each child have an article different from the rest of the class, but every pupil should make something according to his ability that will "work." Carts, wheelbarrows, windmills, whirligigs, derricks, etc., are suggested. In addition to the bristol board other materials furnished by the children may be used, such as pins, toothpicks, skewers, wire, twine, button moulds, and empty spools. Emphasis should be laid on having the object correctly designed and workable rather than on accuracy of measurement and finish of workmanship.

JUNE.

FIRST AND SECOND WEEKS.

Transportation.

Have the principles developed in the last lesson carried still further and applied to a familiar adjunct of transportation, such as automobiles, trucks, boats, airplanes, elevated tracks, trains, a station, or an escalator. This may also be given for group work, different parts of the system being worked up by different pupils.

SPECIAL, SPECIAL ENGLISH AND UNGRADED CLASSES.

Since children of these classes particularly need drill in language and number work, attention is called to the fact that, aside from its intrinsic educational value, manual training is an excellent medium for concrete work in both subjects. In most cases the work of Grade IV. will probably best meet the needs of the pupils, but in some instances it may be advisable to select problems from each grade.

Whatever the problem the work should be carried on slowly and with regard to what most interests the children. Special attention is called to the postcard, circles, tangram and candy basket in the first part of Grade IV.; and for more difficult problems to the paper bag, lamp shade, tabouret and mechanical problems in the last part of the same grade.

MANUAL TRAINING. GRADE V. BOOKBINDING.

Two hours a week are allowed for this work.*

Aims.

1. To develop ability to plan simple constructive work.
2. To give practice in making the simplest working drawings.
3. To develop greater accuracy in the use of the rule, triangle and scissors.
4. To give some experience in elementary bookbinding.
5. To teach practical application of design and good lettering through correlation with drawing.
6. To develop inventional ability.

Means.

1. Planning construction of simple articles made of bookbinding materials.
2. Making working sketches of parts, correctly dimensioned.
3. Accurately laying out and cutting these parts.
4. Assembling these parts, using technical processes.
5. Applying good lettering, correct space division, pleasing proportions and simple decorations.
6. Working out original problems.

Minimum Requirement.

To plan and make correct working sketches of six simple articles.

To construct these articles of bookbinding materials with reasonable skill.

* One half of this time is, in boys' schools, devoted to clay modelling.

To bind one book.

To plan and construct one original article.

General Directions.

The work is designated as bookbinding, although it includes models which, strictly speaking, are not books. It is of an elementary character and logically follows the work in cardboard construction, employing similar processes.

To develop individual initiative and the ability to plan and to complete simple constructive work is one of the most important aims of manual training, and the one most likely to be overlooked by the conscientious grade teacher. Therefore, as far as possible all models are presented as problems to be worked out by each pupil individually, and it is hoped that many classes will be able to attain satisfactory results, the teacher giving directions no more specific than those which follow. It is not expected that these directions will be entirely clear to teachers conducting the work for the first time, without the additional information and especially the demonstration which will be given at the teachers' meetings, but a little experimenting with the actual materials, with the outline at hand, will do much toward making them intelligible.

It is desired that work be kept for the inspection of the assistant in manual arts, as follows:

1. A full set of the last model made.
2. A full set of the last working drawing made.
3. One or two specimens of each model and each drawing made since the last visit of the assistant.
4. Several examples of any work correlating with drawing or other subjects, outline or original.

Otherwise it is recommended that, with the permission of the principal, the work be returned to the children soon after its completion, but not at the end of the lesson in which it is completed.

One copy of "Bookbinding for Beginners" is furnished for each teacher and the problem numbers refer to that book.

SEPTEMBER.

FIRST WEEK.

Envelope. (Problem II.) Materials: "Wrapping Paper."

NOTE.— Before giving this lesson the teacher should place on the blackboard a sketch of the envelope without dimensions. Talk over with the class the dimensions desired and add the figures to the drawing. The face should not be larger than 10 by

13 inches, with laps of about $1\frac{1}{2}$ inches at each end, onto which the back is to be pasted. At one side plan an opening with a narrow flap. Smaller envelopes may be made if desired.

Directions.— From the blackboard sketch lay out the envelope on the wrapping paper, cut fold and paste. This should be used to hold individual materials throughout the year.

SECOND AND THIRD WEEKS.

Blotter or Pocket Memorandum Pad. (Problem III., C. or D.)
Materials; “Newsboard” for body; “Vellum” for covering; white or blotting paper for filling.

OCTOBER.

FIRST WEEK.

Paper Book Cover. Material: “Wrapping Paper.”

Select a book for which the cover is to be made. Plan a strip of screenings which shall be wide enough to extend about 2 inches beyond the top and bottom edges of the book and long enough to extend around the back and sides and to fold back over edges with a lap of about 3 inches.

Make a dimensioned sketch of this piece. Draw it on the screenings and cut out. Leaving outside spaces approximately equal, draw two parallel lines, lengthwise of this piece, the distance between which shall be $\frac{1}{4}$ of an inch more than the distance from the top to the bottom of the book. Fold along these two lines to form laps. Lay the back of the book on the center of the strip at right angle to the folded edges, with the laps up. Wrap the strip around this book and fold the projecting ends inside the cover but not so tight that the book will not close easily. Remove screenings and crease all folds very hard. At each corner where the second fold is pressed back on the first, place a little paste, avoiding surfaces which are to touch the book. After pasting, dry the covers flat, under weight. To apply the paper covers fold both stiff covers backward and insert them in the pockets. The name of the book should then be carefully printed on the paper cover.

SECOND, THIRD AND FOURTH WEEKS.

Pencil Holder. (Problem IV.) Materials: “Newsboard” for body; “Vellum” for face covering and pocket; and “Lining Paper” for back covering.

NOVEMBER.

FIRST AND SECOND WEEKS.

Calendar Stand. (Problem V.) Materials: "Newsboard," "Vellum," and "Lining Paper."

THIRD AND FOURTH WEEKS.

Checker Boards. (See "War Time Occupations," pages 33-36.)

DECEMBER.

FIRST, SECOND AND THIRD WEEKS.

Hinged Covers for Cook Book. (Problem VI.) Materials: "Newsboard" for body of covers; "Oilcloth" for covering; "Lining Paper" for inside of covers; "Eylets"; "Macramé Cord."

These covers should be made for the cook books used in girls' classes. Secure a copy from the cooking teacher to use in planning. See that the covers project at least $\frac{1}{8}$ of an inch beyond the book. Cover the outside with oilcloth and line with paper. When the covers are completed they should be tied together with macramé cord and sent to the cooking teacher.

JANUARY.

FIRST, SECOND, THIRD AND FOURTH WEEKS.

Box with Covers. (Problem VII.) (For Grades I., II. and III.) Materials: "Newsboard," "Vellum" and "Lining Paper."

The bottom should be 3 inches by $4\frac{1}{2}$ inches and the sides $1\frac{5}{8}$ inches in height. The cover should be $\frac{1}{8}$ inch larger in both directions than bottom, and its sides $\frac{5}{8}$ inch in width.

Make a second set of boxes exactly like first. When completed these boxes are to be turned over to the master of the district for distribution in Grades I., II. and III. If not needed the number available should be reported to the Department of Manual Arts for use in girls' schools.

FEBRUARY.

FIRST WEEK.

Original Work.

It is desired to continue the original work begun in the fourth grade and thereby more closely connect the general constructive work of the lower grades with the wood work of the sixth grade.

The suggestions given on pages 49 and 50 apply equally well to this grade and should be used as a foundation for inspiring such work.

School time may be used for this purpose and home work should be encouraged. The object is not to secure a product that was never seen or heard of before, but to lead each boy to plan and construct for himself a pleasing article.

Suggestions by parent or teacher are desirable and helpful but the finished product should be the pupil's own work.

SECOND AND THIRD WEEKS.

Picture Frame.

First choose size of picture and then width of frame. This may be uniform on all sides or one may observe the rules for margins as for the calendar. Make a careful drawing of the outside of the frame and opening, and then lay out and cut the newsboard as indicated. For covering, plan and cut a piece of vellum, paper or other material which shall extend beyond the newsboard on each side for at least one-half an inch. On this material indicate the position of the newsboard including the opening for the picture. Also draw lines one-half an inch inside and parallel to the lines indicating the opening. Cut on these lines and at each corner cut oblique lines to allow the laps to fold under. For the back there should be planned and cut another piece of newsboard one-eighth of an inch shorter than the front and of the same width; and to cover it a strip of covering material three-eighths of an inch longer and one-quarter of an inch narrower than the newsboard.

To assemble: Paste the foundation of the front to the covering and turn under and paste the laps at the opening. At this time paste only one outside lap and that the top one. Over one end of the newsboard-back turn the outside strip about half an inch and paste this down leaving the remainder of the piece free. Place this piece of newsboard against the front, with the pasted end at the top, and over both pieces of newsboard paste the three

laps attached to the front side. Fold back the free piece and paste as a lining over the back. The picture should be inserted at the opening in the top.

MARCH.

FIRST, SECOND, THIRD AND FOURTH WEEKS.

Portfolio or Magazine Cover. (Problem IX.) Materials: "Newsboard," "Vellum," "Lining Paper" and "Tape."

Make this for a definite purpose, such as holding the Palmer Writing Book, a notebook, composition papers, or maps. The size should not be larger than 8 inches by 10 inches.

Use lining paper or wall paper for the outside, and line the inside with drawing paper decorated with a surface pattern. (See Drawing Lesson.)

APRIL.

FIRST, SECOND AND THIRD WEEKS.

Book. (Problem X. or XI.) Materials: "Newsboard," "Vellum," "Lining Paper," 8½-inch by 11-inch "Paper," "Tape," "Sewing Linen" and "Super." This may be sewed either with or without the frame—the latter method being found easier by most teachers who have tried it. Those who desire more frames (not to exceed three to a class) should consult with the department not later than March 1, preferably sooner.

The book should consist of ten signatures each having two sheets placed together and folded as one.

Use lining paper or wall paper for outside of the "case." If desired, fly-leaves may be made of drawing paper decorated with a surface pattern.

MAY.

FIRST AND SECOND WEEKS.

Book. Complete.

THIRD AND FOURTH WEEKS.

Original Project.

Design and construct some object which may be based on an article previously made but having different dimensions, such as pad, calendar, box, or covers. It is also suggested that in individual cases some mechanical construction be attempted. In such cases

the newsboard may be used as a foundation for structural works, such as inclined railways, elevated stations, towers, etc. Eyelets are excellent for fastening the various parts together.

JUNE.

FIRST AND SECOND WEEKS.

Complete original project.

SPECIAL NOTE.

Pupil in boys' schools should make at least the following articles:

Blotter.

Checker board.

Calendar.

Hinged covers for cook book.

Box with cover.

Book or portfolio.

SCHOOL DOCUMENT NO. 13—1919
BOSTON PUBLIC SCHOOLS
COURSE OF STUDY FOR THE
MECHANIC ARTS HIGH SCHOOL



BOSTON
PRINTING DEPARTMENT
1919

Course of study adopted.
Attest:

IN SCHOOL COMMITTEE, June 21, 1915.

THORNTON D. APOLLONIO,
Secretary.

Revised course adopted.
Attest:

IN SCHOOL COMMITTEE, June 2, 1919.

THORNTON D. APOLLONIO,
Secretary.

COURSE OF STUDY
FOR THE
MECHANIC ARTS HIGH SCHOOL

[Dalton and Belydere Streets]

INTRODUCTION.

1. Pupils are admitted to the Mechanic Arts High School only upon the presentation of an admission card signed by the Superintendent. Admission cards are granted by the Superintendent:

- (a.) To graduates of the day elementary schools.
- (b.) To graduates of private day schools approved by the Board of Superintendents.
- (c.) To graduates of the evening elementary schools.
- (d.) To graduates of day elementary schools of cities and towns of Massachusetts approved by the Board of Superintendents.
- (e.) To those who have successfully passed examinations authorized or given by the Board of Superintendents.

(f.) To those pupils who have attended day high schools other than those of Boston, who present evidence of competency satisfactory to the Head Master and approved by the Board of Superintendents, which may consist of certificates signed by the proper authorities, or of examinations. The Head Master will determine the subjects and the number of points for which advanced standing may be given, and will issue certificates therefor.

2. Examinations for admission to day high schools are held on the Friday immediately following the second Wednesday in September.

3. The school is in session from 9 a. m. to 3.20 p. m., for five days in the week. Of this time, ten minutes are given to opening exercises, thirty minutes to recess, and the remainder is divided into eight periods. The recitations in the academic subjects are scheduled in the first six periods, ending at 1.56, but a boy may have shop exercises that extend until 3.20 on alternate days. The period from 1.56 to 2.39 is devoted to supervised study. The entire schedule of work is arranged in two alternating daily programs. This accounts for the fraction $\frac{1}{2}$ in the time allotments, because a given exercise occurs twice in one week and three times in the next.

THE COURSE OF STUDY.

The school aims to fit boys for worthy citizenship in a democracy, and for rapid advancement in many of the activities in the complex industrial order of this age.

The primary purpose of the course of study is to meet the needs of boys whose dominant interests are in science, mathematics, drawing, and the mechanic arts, and whose education will probably end with this school. In order, however, that the outlook of boys who may wish to carry their technical education further shall not be limited at the outset, the school offers, secondarily, in the last three years, a course that will enable good students to continue their education in such evening courses as those of the Lowell Institute School for Industrial Foremen, or in the regular courses of the best technical colleges. A boy is advised to choose the course most likely to be of service to him in whatever work he intends to take up immediately after graduation.

While many of the subjects of study are similar to those in general high schools, and their logical development is not neglected, special emphasis is placed upon the practical applications of science, mathematics, and drawing in engineering and mechanical work.

In addition, every boy is required to take courses in woodworking, pattern-making, forging, and machine shop practice. The purpose of these courses is to give clear notions of good workmanship, accurate and systematic knowledge of the fundamental processes common to many industries, and keen appreciation of the importance of mechanical activities and the value of mechanical intelligence. This training, coupled with thorough instruction in related academic subjects, appeals strongly to many boys and tends to develop the qualities required for leadership in many positions that offer great promise of successful careers. The combined experiences of the shops, drawing rooms, laboratories, and class rooms,

help boys to form correct judgments concerning their fitness for a given employment.

At the outset, the exercises in the mechanical department are planned to acquaint boys with essential elementary processes, but as soon as practicable, attention is turned to finished products of commercial value whenever such work can be made a factor in systematic courses of instruction. The shop-work is adapted to illustrate and enforce approved shop organization and methods, but emphasis is rightly placed upon instruction rather than output. The training in drawing and in the academic subjects is closely correlated with the shop-work.

It should be noted that the Mechanic Arts High School does not perform the functions of a trade school. By specific designation, it is a *high* school and the characteristic feature of its course of study is indicated by the words *mechanic arts*. Its purpose is in accord with that of the best technical high schools recently organized. Considerable dexterity is developed by the shop-work, but provision is not made for sufficient repetition of operations to produce the skill of hand of a journeyman. Moreover, the aim of a trade school is to teach thoroughly some one trade as rapidly as the student's ability will permit. This school, on the other hand, teaches the processes that are fundamental to many trades, with a view to fitting boys for executive positions in which mechanical insight and judgment are essential to success. In many cases, the approach to such positions is through the workshop and the training which the school gives leads to rapid advancement. Experience has shown that graduates readily find profitable employment.

For the large number who can go no further, one course provides the best equipment that a high school can give for successful careers in many forms of elementary engineering. For those who desire it, the other course opens the door to the complete engineering training of the technical colleges.

COURSE OF STUDY.

FIRST YEAR.

	Periods.
Applied Mathematics, including elements of Algebra	5
English	2½
General Science and Hygiene	2½
Civics	2½
Wood-working	10*
Drawing	2½

SECOND YEAR.

Group A.

Applied Mathematics, including elements of Plane Geometry	5
English	2½
United States History, Industrial and Political	2½
Applied Science	2½
Pattern-making and Forging	10*
Drawing	2½

Group B.

Algebra	2½
Plane Geometry	2½
English	2½
United States History, Industrial and Political	2½
French	2½
Pattern-making and Forging	10*
Drawing	2½

THIRD YEAR.

Group A.

Applied Mathematics, including elements of Solid Geometry and Trigonometry	5
English	2½
Physics	5
Industrial History of Europe	2½
Machine Shop Practice	10*
Drawing	2½

Group B.

Plane and Solid Geometry	5
English	2½
Physics	5
German	2½
French	2½
Machine Shop Practice	5*
Drawing	2½

* The subjects starred receive only one-half as many points as the number of periods assigned to them.

FOURTH YEAR.

Group A.

	Periods.
Principles of Surveying	2½
English	2½
Chemistry	5
Economics	2½
Elementary Engineering	5*
Advanced Laboratory or Shop Work	10*
Architectural Drawing, Machine Design or Industrial Design	2½

Group B.

Plane Trigonometry	2½
English	2½
Chemistry	5
History and Government of United States	2½
Algebra	2½
German	5
French	2½

Boys who expect to continue their education beyond this school should take the subjects in B Groups. The subjects common to both groups are required of all students, but a boy may complete his program by choosing additional subjects from either group, with the approval of the Head Master.

Eighty points are required for a diploma.

* The subjects starred receive only one-half as many points as the number of periods assigned to them.

SCHOOL DOCUMENT NO. 14—1919
BOSTON PUBLIC SCHOOLS

CANDIDATES ELIGIBLE FOR
APPOINTMENT AS TEACHERS

JULY, 1919



CITY OF BOSTON
PRINTING DEPARTMENT
1919



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BOSTON PUBLIC SCHOOLS,
OFFICE OF BOARD OF SUPERINTENDENTS,
MASON STREET, July, 1919.

This document comprises the fourteenth list of candidates eligible for appointment to permanent positions in the public day schools of Boston, revised and completed to date. It contains the names of all candidates included in the list issued in July, 1918, who have not yet been appointed to permanent positions in the service, and whose certificates are still valid, with the exception of those who have asked that their names be omitted from this list. It also contains the names of persons who have successfully passed examinations held since that date, including Boston Normal School graduates of June, 1919.

Graduates of the Boston Normal School prior to June, 1919, whose names are entered in this list, have been regraded by the Board of Superintendents in accordance with the rules of the School Committee (section 83, paragraph 2), and their present ratings supersede those given in the 1918 list.

In this document appears the first list of candidates rated for promotion to the rank of principal of a day elementary or day intermediate school district, which ratings are in accordance with the plan submitted to and approved by the School Committee at the meeting of January 6, 1919. The names of candidates who received a rating of less than 725 points out of a maximum of 1,000 points are not published, but such ratings are accessible to the individuals concerned upon application to the Superintendent.

CLASS-ROOM INSPECTION OF CANDIDATES FOR CERTIFICATES OF QUALIFICATION.

The plan for the class-room inspection of candidates for certificates of qualification, established in January, 1913, has been continued, and all candidates certificated

this year for permanent day school service have been visited in the class room by a member of the Board of Superintendents, with the exception of those whose original examination included a demonstration lesson. The results of the class-room demonstrations are given weight in determining the credit to be allowed for "Experience in Teaching."

SCHOOL NURSES.

This document also contains the names of candidates for appointment as school nurses in the public schools. The regulations of the School Committee with respect to the appointment, reappointment, assignment, transfer, removal, tenure of office, and marriage of teachers apply in general to nurses, and their certificates cease to be valid in accordance with the regulations governing the expiration and revocation of teachers' certificates of qualification.

APPOINTMENTS FROM THE ELIGIBLE LISTS.

Except as hereinafter provided, no person may be appointed to a permanent position as a teacher or member of the supervising staff whose name does not head the proper eligible list and who is willing to accept such appointment; provided, that if in the opinion of the Superintendent there is good reason why such person should not be appointed, he shall so certify to the Board, whereupon the same procedure shall be followed with respect to the second person on the list; but the person appointed shall be one of the first three on said list willing to accept appointment.

These restrictions do not affect the promotion of a permanent teacher to a higher rank in a school of the same class as that in which the teacher is already employed.

APPOINTMENTS NOT GOVERNED BY ELIGIBLE LISTS.

Appointments as principal of a school, except day elementary and day intermediate schools, as director,

first assistant director, or assistant director of a special subject or department, as supervisor or assistant supervisor of a special subject or department, as teacher in the Normal School, as instructor of military drill, as medical inspector of special classes, as supervising nurse, as temporary teacher, as substitute, as special assistant, as teacher in the evening schools, are not governed by the eligible lists.

AGE LIMITATION.

No person may be appointed to a permanent position as teacher or member of the supervising staff in accordance with the provisions of the foregoing paragraphs to take effect later than the thirtieth day of June following the fortieth birthday of such person; provided, that this limitation shall not affect the promotion of a permanent teacher to any position in the public schools, nor the validity of certificates issued prior to January 1, 1909.

DATES OF CERTIFICATE EXAMINATIONS.

The Board of Superintendents annually conducts examinations of candidates for appointment as members of the supervising staff and as teachers in the public schools.

The 1919 examinations for evening school certificates will be held on Friday, September 12, at the Boston Normal School-house, Huntington avenue, near Longwood avenue.

The 1920 examinations for day school certificates of qualification will be held during the week beginning Monday, January 26, at the Boston Normal School-house, Huntington avenue, near Longwood avenue.

Other examinations may be held whenever, in the opinion of the Superintendent, the needs of the schools require.

CITIZENSHIP REQUIREMENTS.

The Board of Superintendents shall not admit to certificate examinations persons who are not citizens of

the United States, or, in the case of women, unless they have filed their declaration of intention to become citizens.

RE-EXAMINATION FOR CERTIFICATES.

A person taking more than one examination of the same class is rated on the eligible list of that class solely upon the results of the latest examination; provided, that holders of the certificates of qualification, IV High School, XXXIII. Intermediate, or XXV. Junior Assistant, Day High Schools, may, by re-examination, obtain a rating in more than one group under said certificates; and provided, further, that if a person holding a valid certificate of qualification shall be re-examined for a certificate of the same grade and shall obtain a rating lower than that held at the time of such re-examination, he may, in the discretion of the Board of Superintendents, retain his original rating, with date of expiration of certificate unchanged.

Detailed information with regard to examinations may be obtained in advance by application to the Secretary of the School Committee.

REMOVALS AND RESTORATIONS OF NAMES FROM AND TO ELIGIBLE LISTS.

The names of persons holding certificates which include certificates of a lower grade may, upon request, be included in the eligible list of such lower grade or grades according to the rating of such holders of certificates in their respective examinations, but they shall not be entitled to a higher rating on such lower list or lists by reason of their holding higher grade certificates.

The names of persons appointed to permanent positions in the day school service are removed from the eligible lists.

A person whose name appears upon the eligible lists may, upon request, have the same removed therefrom at any time, and may, upon written application, have

it restored to the next eligible lists in June of any year during the life of the certificate, with the same rating as before; or, if a graduate of the Boston Normal School, with such re-rating as the Board of Superintendents may determine; provided, that such restoration shall not operate to extend the original period for which the certificate is valid.

The names of persons appointed as substitutes, temporary teachers, special assistants, or as teachers in the evening schools, are not removed from their respective eligible lists because of such appointment.

The name of any person who has refused three offers of permanent employment shall be dropped from the eligible list for the current school year. The name of any person appearing upon any eligible list who has failed of appointment on three separate occasions when another person on the same list has been selected and appointed, shall be dropped therefrom and shall not be restored thereto except by another examination.

CHANGE IN RATING.

Persons whose names appear on any eligible list and who desire to have their ratings changed, may have this done by passing another examination.

NORMAL SCHOOL GRADUATES MAY OBTAIN RATING UPON OTHER LISTS.

Boston Normal School graduates may obtain positions on the regular Elementary, Class B list by passing the prescribed examination. In that event they will be rated on the "Examined List" according to the results of such examination, and their names will be removed from the lists of holders of Normal School certificates.

EXPIRATION AND REVOCATION OF CERTIFICATES.

Certificates issued on examination after June 1, 1906, cease to be valid on the thirtieth day of June of the sixth year following the date of issue; provided, that

no certificate shall remain valid after the thirtieth day of June next following the fortieth birthday of the holder thereof, except as hereinafter specified. This limitation as to age does not affect the validity of certificates which do not render the holders eligible for appointment to permanent positions as members of the supervising staff or as teachers in the public schools, nor the validity of certificates issued to permanent teachers in the public schools.

Certificates issued on examination prior to June 1, 1906, ceased to be valid on the thirtieth day of June of the second year following the date of issue, except as hereinafter provided.

* Certificates issued to graduates of the Boston Normal School prior to June 1, 1906, ceased to be valid June 30, 1912, except as hereinafter specified.

* Certificates issued to graduates of the Boston Normal School after June 1, 1906, cease to be valid on the thirtieth day of June of the sixth year following the date of issue, except as hereinafter provided.

Certificates issued on examination prior to June 1, 1906, and valid on that date by reason of renewal or of service in the Boston public schools, ceased to be valid June 30, 1908, except that regular high school certificates held by teachers serving during the year ending June 30, 1906, in permanent positions in the elementary day schools of Boston, ceased to be valid June 30, 1912, except as hereinafter provided.

The validity of certificates issued prior to June 1, 1906, which include positions in day schools of a different class, but which also include the position in which the holder thereof is employed, expired with respect to such day schools of a different class on June 30, 1912; nor does the validity of any certificate issued after June 1, 1906, extend beyond the thirtieth day of June of the sixth year following the date of issue by reason of

* By action of the School Committee on April 22, 1912, the validity of Normal School certificates, issued in June, 1906, and prior to that date, was extended to June 30, 1913, with the distinct understanding that under no circumstances shall the validity of other certificates as now determined by the rules be extended.

the service of the holder thereof in schools of a different class than that in which the holder is employed.

All certificates under which appointments are made to permanent positions in the day school service, and certificates of a higher grade, but including the position in which the holder thereof is employed, remain valid with respect to the class of schools in which the holder thereof is employed during the term of such service.

All certificates, except those under which appointments are made to permanent positions in the day school service, cease to be valid when the names of the holders are permanently removed from the eligible lists.

Any certificate may be revoked by the Board of Superintendents if, in its opinion, the good of the service so demands.

TEMPORARY CERTIFICATES AND LICENSES.

All certificates are non-renewable, but the Board of Superintendents may issue instead thereof temporary certificates or licenses under such conditions as that Board may determine, which entitle the holders to serve in temporary positions of such rank and in such schools as may be specified.

Temporary certificates are valid for such length of time as the Board of Superintendents may determine, but not beyond the thirtieth day of June of the sixth year following the date of issue. Licenses may not extend beyond the thirty-first day of August of the second year following the date of issue.

ELIGIBLE LISTS MAILED CANDIDATES.

A copy of the eligible lists, as soon as printed, is mailed to persons whose names appear thereon.

THORNTON D. APOLLONIO,
Secretary.

HIGH SCHOOL CERTIFICATES.

ANCIENT LANGUAGES.

<i>Men.</i>		
Rating.	Name.	Certificate Expires
902	Charles Jones	June 30, 1923
883	Edward F. McKay	" 30, 1925
869	Clinton B. Wilbur	" 30, 1923
812	Wayne M. Shipman	" 30, 1920

Women.

861	Anna A. Raymond	June 30, 1920
794	Helen J. Goodspeed	" 30, 1920
780	Mildred E. Hastings	" 30, 1922

BOTANY—ZOOLOGY.

Men.

816	Walter S. Atwood	June 30, 1921
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Women.

922	Katharine C. Collins	June 30, 1925
760	Harriett A. Sleeper	" 30, 1921

COMMERCIAL BRANCHES.

BOOKKEEPING AND COMMERCIAL ARITHMETIC.

Men.

743	Leo T. Foster	June 30, 1923
723	Gregory J. Scanlon	" 30, 1921
721	Harry C. Northrop	" 30, 1923

Women.

723	Caroline H. McCarthy	June 30, 1924
722	Mary F. Osborne	" 30, 1922

PHONOGRAPHY AND TYPEWRITING.

Men.

736	John H. Finn	June 30, 1922
726	Thomas A. Scanlon	" 30, 1924

Women.

798	Dorothea Cushing	June 30, 1925
746	Edith E. Bennett	" 30, 1922
730	Mary A. Cahill	" 30, 1923

ECONOMICS.

Men.

783	Miah J. Falvey	June 30, 1923
752	John A. Bergin	" 30, 1922
730	William J. Pendergast	" 30, 1925

High School Certificates (*Continued*).

Rating.	Name.	Women.	Certificate Expires
739	Mary J. Mohan		June 30, 1922

ENGLISH.

Men.

794	Maurice Ferber	June 30, 1922
791	John M. Grandfield	" 30, 1925
761	Alexander W. Miller	" 30, 1922
753	Harold W. Gammans	" 30, 1920
753	Leo H. Grueter	" 30, 1923
710	Thomas W. Sheehan	" 30, 1921

Women.

892	Alice E. Murphy	June 30, 1925
856	Mary M. Devlin	" 30, 1923
849	Frances Burnce	" 30, 1923
846	Marjorie G. Smith	" 30, 1923
837	Flora E. Billings	" 30, 1923
831	Elaine S. Whitman	" 30, 1922
827	Sophia M. Palm	" 30, 1925
824	Miriam N. Marsh	" 30, 1921
822	Catharine B. Beatley	" 30, 1922
820	Alice A. Brophy	" 30, 1921
807	Bessie H. Jaques	" 30, 1920
804	Floralyn Cadwell	" 30, 1921
794	Regina J. Kees	" 30, 1925
788	Ellen A. Barry	" 30, 1923
768	Olive A. Beveridge	" 30, 1922
767	Lillian M. Smith	" 30, 1921
763	Margaret M. Sallaway	" 30, 1923
762	Edna T. Wilson	" 30, 1920
754	Marion B. Lincoln	" 30, 1921
735	Elizabeth M. Barden	" 30, 1925

FRENCH.

Men.

877	George A. Cummings	June 30, 1925
775	Herbert F. Hartwell	" 30, 1920

Women.

848	Julia A. Dorrington	June 30, 1920
847	Edith M. Gartland	" 30, 1924
824	Myra H. A. Marshall	" 30, 1920
816	Ethel G. McElroy	" 30, 1920
803	Gertrude Karman	" 30, 1920
771	Edith H. Bradford	" 30, 1923
769	Hazel W. Ruggles	" 30, 1924

High School Certificates (*Continued*).

Rating.	Name.	Certificate Expires
750	Dorothy Stanwood	June 30, 1925
714	Anna F. Walsh	" 30, 1922
704	Marietta L. Kirby	" 30, 1920

GERMAN.

859	Helen M. Fitzgerald	June 30, 1923
812	Eleanor L. Cox	" 30, 1920
774	Katharine M. Schubarth	" 30, 1922

HISTORY.

Men.

888	Warren C. Johnson	June 30, 1923
888	Earl S. Lewis	" 30, 1923
865	Lester H. Cushing	" 30, 1923
841	Daniel L. Daley	" 30, 1925
825	Fred H. Kierstead	" 30, 1925
817	Percy V. Stroud	" 30, 1922
814	John J. Boyan	" 30, 1922
771	James H. Carroll	" 30, 1922

Women.

849	Marie R. Madden	June 30, 1923
771	Amy C. Farlin	" 30, 1920
750	Geraldine B. Kennedy	" 30, 1922

HOUSEHOLD SCIENCE.

864	Marion Keeler	June 30, 1925
859	Agnes L. Callaghan	" 30, 1923

MATHEMATICS.

Men.

901	Bancroft Beatley	June 30, 1925
797	Joseph A. Leary	" 30, 1925
786	Walter L. McLean	" 30, 1923
785	Charles H. Mergendahl	" 30, 1924
782	Howard B. Baker	" 30, 1920
708	Guy C. Blodgett	" 30, 1922
705	Thomas J. Hoey	" 30, 1922

Women.

897	Gertrude M. Greene	June 30, 1925
842	Marion C. Moreland	" 30, 1923
828	Mary J. Quigley	" 30, 1925
809	Louise B. Foster	" 30, 1922
788	Florence M. Gilmore	" 30, 1920
707	Eleanor M. Kyle	" 30, 1922

High School Certificates (*Concluded*).

MERCHANDISE AND STORE ORGANIZATION.

Rating.	Name.	Certificate Expires
811	Walter L. McLean	June 30, 1925

PHYSICS—CHEMISTRY.

Men.

859	Dennis C. Haley	June 30, 1925
843	Arthur V. Donnellan	" 30, 1925
827	Charles L. Kelley	" 30, 1922
810	Arthur B. Stanley	" 30, 1923
807	Henry G. Blount	" 30, 1920
796	John W. McCormack	" 30, 1923
791	Thomas A. Pickett	" 30, 1923
788	Ralph H. Bragdon	" 30, 1923
772	Christopher A. FitzGerald	" 30, 1922
771	Raymond S. Tobey	" 30, 1922
769	Frank V. Gordon	" 30, 1922
765	Earl W. Battles	" 30, 1922
747	William J. Nutter	" 30, 1921
734	David W. Rial	" 30, 1920
716	Clayton E. Gardner	" 30, 1922
714	Edward W. Ellsworth	" 30, 1925
713	Leighton S. Thompson	" 30, 1921

Women.

879	Edna M. Hurlin	June 30, 1920
774	Angie G. Allbee	" 30, 1921
771	Helen M. Stevens	" 30, 1920

SALESMANSHIP.

804	Tilla McCarten	June 30, 1922
787	Constance E. Burrage	" 30, 1921
780	Anjennette Newton	" 30, 1922

SPANISH.

Men.

827	James C. Corliss	June 30, 1923
725	Joseph A. Hennessey	" 30, 1925
700	Henry A. Sasserno	" 30, 1924

Women.

841	Elizabeth W. Loughran	June 30, 1923
833	Katharine E. Barr	" 30, 1925
810	Grace H. Kennedy	" 30, 1923
784	Dorothy J. Connelly	" 30, 1925
757	Ulrika E. Benson	" 30, 1922
709	Marietta L. Kirby	" 30, 1922
700	Leonora C. Murray	" 30, 1923

HIGH SCHOOL SPECIAL CERTIFICATE.

Rating.	Name.	Certificate Expires
844	James P. Farnsworth	June 30, 1923
821	William McRobbie	" 30, 1922
803	Joseph R. B. Dunn	" 30, 1923
777	James H. Philbrick	" 30, 1923
772	Ernest E. Town	" 30, 1922

SPECIAL CERTIFICATES VALID IN DAY HIGH SCHOOLS.

COMMERCIAL BRANCHES.

BOOKKEEPING AND COMMERCIAL ARITHMETIC.

<i>Men.</i>		
Rating.	Name.	Certificate Expires
766	Stanley O. Smith	June 30, 1925
758	Roland V. Tracy	" 30, 1923
743	Joseph S. Snow	" 30, 1922
718	Arthur W. Leavitt	" 30, 1924
<i>Women.</i>		
814	Mary G. Gould	June 30, 1924
768	Ellen A. Regan	" 30, 1925

PHONOGRAPHY AND TYPEWRITING.

<i>Men.</i>		
701	Rema J. Henderson	June 30, 1922
<i>Women.</i>		
844	Ellen G. Wiseman	June 30, 1925
808	Marie L. Brewster	" 30, 1925
787	Marion J. Cromwell	" 30, 1925
757	Mary E. Doherty	" 30, 1925
755	Elizabeth E. Haggerty	" 30, 1924
750	Katharine J. Burke	" 30, 1922
740	Katherine E. Holland	" 30, 1925
702	May M. Austin	" 30, 1924

MANUAL ARTS.

DRAWING.

<i>Men.</i>		
758	Charles H. B. Morse	June 30, 1925
726	Reginald S. Kidd	" 30, 1920
<i>Women.</i>		
827	Mary P. Barry	June 30, 1925
823	Laura W. Cook	" 30, 1923
801	Elizabeth M. P. Bartlett	" 30, 1920
797	Clara E. Glover	" 30, 1925

Special Certificates Valid in Day High Schools (Concluded).

Rating.	Name.	Certificate Expires
771	Evelyn Silvester	June 30, 1924
765	Marion McIntyre Ford	" 30, 1920
744	Dorothea Davis	" 30, 1922

MANUAL TRAINING.

740	Kenrick M. Baker	June 30, 1924
735	William E. O'Connor	" 30, 1921
706	William A. Courchene	" 30, 1924

PHYSICAL TRAINING.

846	Theresa B. Maley	June 30, 1924
833	Alice M. Gorman	" 30, 1925
826	Gertrude M. Fossett	" 30, 1924
825	Catherine L. McCormick	" 30, 1924
824	Marion W. Owen	" 30, 1924
819	Clare Eastman	" 30, 1924
813	Dorothy Sayer	" 30, 1924
812	Mary T. McDermott	" 30, 1924
807	Rosamond Estabrook	" 30, 1924
807	Virginia E. Pierce	" 30, 1924
803	Miriam R. Driscoll	" 30, 1925
800	Izannah A. Lucas	" 30, 1921
793	Elizabeth M. Hampe	" 30, 1924
787	Grace E. Kingsbury	" 30, 1921
776	Josephine A. McLaughlin	" 30, 1920
773	Joanne F. Tobin	" 30, 1924
770	Matilda F. Ractliffe	" 30, 1924
768	Matilda E. Cogan	" 30, 1924
766	Grace M. Monahan	" 30, 1922
759	Helen P. Shepardson	" 30, 1920
743	Rachel Rosnosky	" 30, 1920
721	Marguerite A. Cahill	" 30, 1920

SALESMANSHIP.

839	Gladys C. Gilmore	June 30, 1924
827	Helen J. Kiggen	" 30, 1924

VOCATIONAL ASSISTANT CERTIFICATE.

<i>Men.</i>		
Rating.	Name.	Certificate Expires
847	Newell W. Edson	June 30, 1921
<i>Women.</i>		
876	Margaret M. Sallaway	June 30, 1925
767	Ethel S. Fletcher	" 30, 1924

INDUSTRIAL INSTRUCTORS, DAY HIGH SCHOOLS CERTIFICATES.

HOUSEHOLD SCIENCE.

Rating.	Name.	Certificate Expires
869	Mary W. Cauley	June 30, 1925

DRESSMAKING.

788	Nina G. Moore	June 30, 1921
758	Catherine A. Murray	" 30, 1922
757	Annie V. Tracy	" 30, 1920
754	Nelly Marrinan	" 30, 1922
717	Alice H. Healy	" 30, 1920

MILLINERY.

807	Eileen M. Harrington	June 30, 1921
772	Mary A. Hourihan	" 30, 1924
745	Mary Travers	" 30, 1921

DAY CLERICAL SCHOOL CERTIFICATE.

(CLERICAL ASSISTANT.)

PHONOGRAPHY AND TYPEWRITING.

Rating.	Name.	Certificate Expires
755	Mae G. Smith	June 30, 1924

JUNIOR ASSISTANT, DAY HIGH SCHOOLS CERTIFICATE.

BIOLOGY.

Rating.	Name.	Certificate Expires
773	John L. Mayer	June 30, 1922

CHEMISTRY.

Men.

831	Dennis C. Haley	June 30, 1922
764	Solomon Schneider	" 30, 1923

Women.

838	Katharine C. Collins	June 30, 1923
775	Viola C. Owen	" 30, 1922

ECONOMICS.

Men.

740	James A. Dunbar	June 30, 1921
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Women.

803	Ruth Elms Gove	June 30, 1923
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Junior Assistant Certificate (*Continued*).

ENGLISH.

Men.

Rating.	Name.	Certificate Expires
868	Philip Marzynski	June 30, 1922
849	John M. Grandfield	" 30, 1923
831	James H. Nolan	" 30, 1923
811	Francis J. Driscoll	" 30, 1923
786	John A. Lahive	" 30, 1922
776	William V. McKenney	" 30, 1922
743	Joseph A. Mahoney	" 30, 1922
713	William J. Pendergast	" 30, 1922

Women.

870	Olive B. White	June 30, 1925
854	Frances Burnce	" 30, 1921
841	Madeline M. Ellis	" 30, 1923
825	Constance Billings	" 30, 1923
824	Marjorie G. Smith	" 30, 1922
810	Agnes E. Kelley	" 30, 1924
788	Sarah G. Stowers	" 30, 1922
778	Katherine Moran	" 30, 1923
773	Helen T. Campbell	" 30, 1921
761	Dorothy S. Starrett	" 30, 1921
758	Regina Hearn	" 30, 1922
732	Mary A. Winn	" 30, 1923

FRENCH.

Men.

809	Leo V. Halloran	June 30, 1923
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Women.

805	Margaret M. Sallaway	June 30, 1921
783	Rena M. Jaquith	" 30, 1922
718	Mildred A. Dacey	" 30, 1923
717	Alice E. Mills	" 30, 1921

GERMAN.

Men.

801	Philip Levy	June 30, 1921
727	Myron Livingston	" 30, 1922

Women.

850	Signhild V. Gustafson	June 30, 1922
798	Katharine M. Schubarth	" 30, 1922
759	Mary E. Peirce	" 30, 1921

HISTORY.

Men.

809	William F. Ward	June 30, 1922
803	Philip J. Bond	" 30, 1922

Junior Assistant Certificate (Continued).

Rating.	Name.	Certificate Expires
768	Vincent L. Greene	June 30, 1922
753	Manus J. Fish, Jr.	" 30, 1922
746	Robert E. Patterson	" 30, 1922
735	Saul L. Seiniger	" 30, 1924
722	William J. Murphy	" 30, 1923
705	Charles O. Halloran	" 30, 1922

Women.

884	Lucile A. Harrington	June 30, 1925
732	Mary C. Brogan	" 30, 1923

LATIN.*Men.*

779	Richard G. Donahue	June 30, 1923
744	George H. Sullivan	" 30, 1922

Women.

819	Mildred E. Hastings	June 30, 1922
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MATHEMATICS.*Men.*

900	Joseph A. Leary	June 30, 1923
832	Charles F. Murphy	" 30, 1923
790	Henry M. J. Halligan	" 30, 1923
716	Herbert C. Bird	" 30, 1922
712	Christopher A. Connor	" 30, 1923

Women.

781	Gertrude M. Greene	June 30, 1921
739	Eleanor M. Kyle	" 30, 1921
722	Josephine M. Calderara	" 30, 1922

PHONOGRAPHY AND TYPEWRITING.

816	Marguerite M. O'Brien	June 30, 1924
767	Agnes T. Conroy	" 30, 1924

PHYSICS.

838	John B. FitzGerald	June 30, 1922
788	William F. Greely	" 30, 1922

SPANISH.*Men.*

786	Frederick J. Hurley	June 30, 1923
768	Henry A. Sasserno	" 30, 1922
763	Thomas L. Sullivan	" 30, 1925

Junior Assistant Certificate (Concluded).

Rating.	Name.	Certificate Expires
751	Louis F. Moore	June 30, 1923
731	James E. Fihelly	" 30, 1923
721	William H. Glennon	" 30, 1923

Women.

776	Leonora C. Murray	June 30, 1924
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NORMAL SCHOOL ELEMENTARY CERTIFICATES, CLASS OF 1919, AND OTHERS AS INDICATED.

Rating.	Name.	Certificate Expires
833	Helen Weisman*	June 30, 1925
827	Edith G. Peterson	" 30, 1925
826	Mabel I. Cormack (Class of 1918)	" 30, 1924
825	Grace M. Toland	" 30, 1925
818	Lucile A. Harrington (Class of 1916)	" 30, 1922
814	Florence Ridlon	" 30, 1925
812	Grace M. MacDougall	" 30, 1925
810	Marion M. Payzant	" 30, 1925
806	Agnes L. Miller	" 30, 1925
806	Elizabeth Chandler†	" 30, 1925
805	Helen B. Mendall	" 30, 1925
804	Gertrude L. Kindred (Class of 1917)	" 30, 1923
803	Julia V. Foley	" 30, 1925
803	Gertrude E. Rockwood	" 30, 1925
799	Helen W. Mosher	" 30, 1925
799	Elinor J. Fowles† (Class of 1918)	" 30, 1924
795	Alice F. Magner	" 30, 1925
794	Mary C. Turnbull*	" 30, 1925
794	Ruth A. Wiberg (Class of 1918)	" 30, 1924
793	Consuelo S. Sedley*	" 30, 1925
792	Mary A. Galligan*	" 30, 1925
791	Katharine A. Collins	" 30, 1925
791	Helen Rosnosky	" 30, 1925
791	Elizabeth A. Millerick*	" 30, 1925
791	Gertrude L. Sullivan*	" 30, 1925
790	M. Carmelita Kavanagh	" 30, 1925
787	Margaret M. Corcoran	" 30, 1925
787	Winifred A. Fohlin	" 30, 1925
785	Elizabeth L. Maggioni (Class of 1918)	" 30, 1924
785	A. Isabelle Timmins	" 30, 1925
784	Frances E. O'Leary	" 30, 1925
783	Ruth A. Bulger*	" 30, 1925
783	M. F. Martina McDonald	" 30, 1925

* Holds Normal, Kindergarten-Primary Certificate.

† Holds Elementary School Special Certificate.

Normal Elementary, Class of 1919 (Continued).

Rating.	Name.	Certificate Expires
782	Josephine M. Calderara† (Class of 1916)	June 30, 1922
781	Elise W. Thurston*	" 30, 1925
779	Emma V. Thomas*	" 30, 1925
779	Helen L. Cronin† (Class of 1914)	" 30, 1920
778	Virginia E. Turnbull	" 30, 1925
777	Irene E. Hutchings	" 30, 1925
776	Marion C. Gilman	" 30, 1925
776	Helen T. Fitzgerald	" 30, 1925
775	Marjorie S. Horne* (Class of 1918)	" 30, 1924
774	Louis F. Moore† (Class of 1917)	" 30, 1923
774	Irene M. Foster*	" 30, 1925
772	Mary I. Tierney	" 30, 1925
772	Helen C. Tobin	" 30, 1925
771	Leo V. Halloran† (Class of 1917)	" 30, 1923
771	Katherine M. Stroup	" 30, 1925
771	Ellen A. Dwyer (Class of 1918)	" 30, 1924
770	M. Anne Green	" 30, 1925
769	Agnes M. McNamara	" 30, 1925
769	Margaret A. Canney	" 30, 1925
769	Carolyn R. Hedstrom	" 30, 1925
768	Alice G. Price	" 30, 1925
767	Mary A. Dunbar	" 30, 1925
766	Violet C. Goetz	" 30, 1925
766	Frances I. Gallagher	" 30, 1925
765	Loyola P. Pfeffer	" 30, 1925
763	Helen M. Lally	" 30, 1925
760	Irene E. Kiely	" 30, 1925
758	Solomon Schneider† (Class of 1917)	" 30, 1923
758	Margaret R. Durant	" 30, 1925
758	Marion A. Cotter	" 30, 1925
758	Lorion G. Hallett	" 30, 1925
757	Dorothy S. Glover	" 30, 1925
756	Celia Levinson	" 30, 1925
756	William J. Murphy† (Class of 1917)	" 30, 1923
755	Ellen V. McLaughlin	" 30, 1925
755	Alice K. Schulkorf	" 30, 1925
753	Rosalie C. Simpson	" 30, 1925
751	Phyllis E. Geary	" 30, 1925
750	Mary J. Carroll	" 30, 1925
749	Muriel G. Gillis	" 30, 1925
747	Marion T. Hughes	" 30, 1925
745	Ruth V. Doyle	" 30, 1925
738	Annie E. Mahoney (Class of 1918)	" 30, 1924
737	Helen R. Sullivan (Class of 1918)	" 30, 1924
731	Florence Hurwitz	" 30, 1925
730	Agnes M. Leavey	" 30, 1925

* Holds Normal, Kindergarten-Primary Certificate.

† Holds Elementary School Special Certificate.

Normal Elementary, Class of 1919 (Concluded).

Rating.	Name.	Certificate Expires
729	Mary A. Campbell	June 30, 1925
727	Pauline M. Halpin	" 30, 1925
725	Catherine E. Flannery	" 30, 1925
724	Marguerite A. Wiles	" 30, 1925
724	George F. Fitzgerald (Class of 1915)	" 30, 1921
724	Bertha A. Mee	" 30, 1925
722	Marguerite G. Crowley	" 30, 1925
721	Kathryn F. Mahoney	" 30, 1925
718	Catherine V. Daley	" 30, 1925
715	Catherine E. Craig (Class of 1917)	" 30, 1923
713	Anna E. Dawley	" 30, 1925
709	Ethel M. Hall	" 30, 1925
709	Joseph H. Gildea* (Class of 1914)	" 30, 1920

The following-named men have not been given a rating for the reason that they left the Normal School before the completion of the required course of study, and too early for any final mark to be given for academic work. Two of the men, Messrs. Geary and Sullivan, left school to enter military service; Messrs. Green, McCarthy and Quinn left the Normal School in order to meet the then pressing need for temporary teachers in high school service:

Patrick L. Geary* (Class of 1917)	June 30, 1923
Thomas L. Sullivan* (Class of 1917)	" 30, 1923
Joseph G. Green* (Class of 1918)	" 30, 1924
John F. McCarthy* (Class of 1918)	" 30, 1924
Ralph F. V. Quinn* (Class of 1918)	" 30, 1924

NORMAL SCHOOL ELEMENTARY CERTIFICATES, PRIOR TO 1919.

(Ratings which are exactly alike are connected by a brace. In other cases of similar ratings there is a decimal difference in favor of the name appearing first on the list.)

Rating.	Name.	Certificate Expires
922	Dorothy C. Peterson	June 30, 1924
911	Louise M. Borré	" 30, 1924
905	Bertha F. Gavin	" 30, 1924
904	Elsie M. Eckman	" 30, 1924
900	Sophia M. Palm*	" 30, 1921
900	Philip Marzynski*	" 30, 1922
899	Alice Pike	" 30, 1924
897	Mary M. Tierney	" 30, 1924
896	Gertrude C. Mellen	" 30, 1924
896	Joseph A. Leary*	" 30, 1923

* Holds Elementary School Special Certificate.

Normal Elementary, Prior to 1919 (Continued).

Rating.	Name.	Certificate Expires
892	Annie S. Belinsky	June 30, 1924
892	Katharine C. Collins*	" 30, 1923
891	Daniel L. Daley*	" 30, 1923
891	Winifred I. Swallow	" 30, 1924
890	Marguerite F. Maloney	" 30, 1924
888	Helen E. Maxwell	" 30, 1923
888	Mary J. Boyhan	" 30, 1924
886	Margaret M. Moore	" 30, 1924
886	Catherine L. McKenna*	" 30, 1923
885	Agnes C. Brennan	" 30, 1924
885	Jane U. Barry	" 30, 1924
883	Mary H. Stroup	" 30, 1920
882	Constance Billings*	" 30, 1923
881	Dennis C. Haley*	" 30, 1922
881	Vincent J. Readdy*	" 30, 1920
881	Walter L. McLean*	" 30, 1921
880	Genevieve C. Grass	" 30, 1924
880	George A. Cummings*	" 30, 1923
879	Helen K. Burke	" 30, 1924
877	Mary G. Sullivan	" 30, 1924
877	Dorothy L. Quinn	" 30, 1924
875	Marguerite M. O'Brien*	" 30, 1922
875	Charles F. Murphy*	" 30, 1923
875	Maurice Davis*	" 30, 1922
875	Alice L. Sheahan	" 30, 1924
874	Joseph A. Hennessey*	" 30, 1922
874	Grace V. Lynch	" 30, 1924
873	John B. FitzGerald*	" 30, 1922
873	Dorothy M. Lyons	" 30, 1924
873	Edith C. Scanlan	" 30, 1923
872	Sarah E. Cohen	" 30, 1923
871	Mary F. Finan	" 30, 1924
869	Grace M. May	" 30, 1923
869	William F. Ward*	" 30, 1922
868	Ethel M. Kelly*	" 30, 1923
868	Dorothy Stanwood*	" 30, 1921
868	Jessie L. Barth	" 30, 1924
867	Francis J. Murphy*	" 30, 1920
866	Anna J. Corliss	" 30, 1922
865	Eva Gordon	" 30, 1923
864	Margaret E. Gallagher	" 30, 1922
864	Christopher A. Connor*	" 30, 1923
864	James L. Duffy*	" 30, 1923
864	Alice C. Coleman	" 30, 1924
863	Edith M. O'Neil	" 30, 1924
862	Rose M. Hickey	" 30, 1924
862	Mary F. Cavanaugh	" 30, 1924

* Holds Elementary School Special Certificate.

Normal Elementary, Prior to 1919 (Continued).

Rating.	Name.	Certificate Expires
861	Frederick J. Hurley*	June 30, 1923
861	Mary E. Peirce*	" 30, 1921
861	Mary E. Milliken	" 30, 1923
860	Susan B. Barker	" 30, 1924
860	Abigail F. Burke	" 30, 1923
860	Francis A. Duffey*	" 30, 1923
860	Margaret M. Welch	" 30, 1924
859	Leonora C. Murray*	" 30, 1921
859	Margaret L. Collins	" 30, 1924
859	Agnes E. Kelley*	" 30, 1923
{ 859	Clyde M. Broaders*	" 30, 1922
{ 859	Marjorie H. Outwater	" 30, 1923
858	Helen M. Dooley	" 30, 1924
857	Ruth Elms Gove*	" 30, 1923
856	Helen G. Keefe	" 30, 1924
{ 856	Ellen A. Leahy	" 30, 1924
{ 856	Albert F. Smith*	" 30, 1923
856	Agnes L. Benson	" 30, 1923
855	Rena M. Jaquith*	" 30, 1922
855	Frances M. Holleran	" 30, 1924
854	Catherine F. McCabe	" 30, 1923
853	Louise K. Faul	" 30, 1923
852	Helen A. Cole	" 30, 1922
852	Ruth G. Hunt	" 30, 1924
852	William J. Pendergast*	" 30, 1922
851	Lillian M. Hanson	" 30, 1923
850	Willa M. Ashton	" 30, 1923
849	Mary M. Carroll	" 30, 1924
849	John A. Lahive*	" 30, 1922
849	James P. Collins*	" 30, 1923
848	Marion R. Graham	" 30, 1923
848	Cyril C. Conroy*	" 30, 1922
848	Consuelo Mathews	" 30, 1924
847	Katherine E. Newell	" 30, 1924
846	Florence C. Cunningham	" 30, 1922
846	Henry A. Sasserno*	" 30, 1922
845	Julia E. Hegarty	" 30, 1923
841	Mary J. Sullivan	" 30, 1924
840	William F. Fleming*	" 30, 1923
839	Thomas A. Ginty*	" 30, 1921
839	Marie Mullins	" 30, 1924
839	Catherine F. Murphy	" 30, 1924
838	Dorothy F. Coughlan	" 30, 1924
838	Mary L. O'Callaghan	" 30, 1924
837	Mary A. Kelley	" 30, 1923
{ 837	James L. O'Brien*	" 30, 1923
{ 837	C. Louise Shea	" 30, 1924

* Holds Elementary School Special Certificate.

Normal Elementary, Prior to 1919 (Continued).

Rating.	Name.	Certificate Expires
837	William V. McKenney*	June 30, 1922
836	Edith I. Swanson	" 30, 1924
836	Mary K. Grass	" 30, 1924
{ 836	Anna C. Hughes	" 30, 1924
{ 836	Cecilia G. Norton	" 30, 1924
835	Leo H. Grueter*	" 30, 1921
835	Mary E. Lawlor	" 30, 1924
835	Mabel O. Dolan	" 30, 1924
835	Mary E. Mulligan	" 30, 1923
833	Vincent L. Greene*	" 30, 1922
832	Marjorie F. Keating	" 30, 1923
832	Kathryn V. Riley	" 30, 1924
832	William M. McCarthy*	" 30, 1922
831	Dorothy M. Burnham†	" 30, 1924
831	Margaret L. McCarthy	" 30, 1924
827	Saul L. Seiniger*	" 30, 1924
827	Francis J. Driscoll*	" 30, 1923
827	James P. Sullivan*	" 30, 1922
827	Marion E. Puttner†	" 30, 1924
827	Alice M. Long	" 30, 1924
826	William H. Glennon*	" 30, 1923
826	Herbert C. Bird*	" 30, 1922
825	Louise F. Carangelo	" 30, 1923
825	George S. McCabe*	" 30, 1923
825	Albert L. Shaughnessy*	" 30, 1921
824	William F. Greely*	" 30, 1922
824	Constance McBride	" 30, 1923
824	Catherine R. Day	" 30, 1923
823	Katherine Moran McCarthy	" 30, 1924
823	Mary E. D. Devereaux	" 30, 1924
822	Emma E. Dvorak	" 30, 1924
821	Manus J. Fish, Jr.*	" 30, 1922
819	Marie C. MacGrath	" 30, 1924
819	Katherine C. Burns	" 30, 1923
817	Elizabeth F. Sheehan	" 30, 1923
816	Joseph A. Fitzgerald*	" 30, 1920
814	William A. Fitzgerald*	" 30, 1922
814	Dorothy M. Tatum†	" 30, 1924
813	Viola C. Owen*	" 30, 1922
813	Frederick L. Mahoney*	" 30, 1922
812	Mary A. Winn*	" 30, 1923
811	Robert E. Patterson*	" 30, 1922
810	Frederick J. Murray*	" 30, 1922
808	Joseph A. Mahoney*	" 30, 1922
806	Agnes L. McQueeney	" 30, 1924
802	Myron Livingston*	" 30, 1922

* Holds Elementary School Special Certificate.

† Holds Normal, Kindergarten-Primary Certificate.

Normal Elementary, Prior to 1919 (*Concluded*).

Rating.	Name.	Certificate Expires
800	James E. Fihelly*	June 30, 1920
798	John M. Grandfield*	" 30, 1923
792	Helen F. Reidy	" 30, 1924
792	Mary G. Armstrong	" 30, 1924
791	Everett C. Yates*	" 30, 1923
789	Mary E. Donovan	" 30, 1924
786	George S. Hennessy*	" 30, 1922
780	Helen Carey	" 30, 1923
779	Francis R. McManus*	" 30, 1923
779	Charles P. York*	" 30, 1922
777	Elizabeth G. Savage	" 30, 1924
771	Mary Miley†	" 30, 1924
769	Ida S. Guptill	" 30, 1924
767	Thomas P. Burns*	" 30, 1922
766	Marie P. Denihan	" 30, 1922
761	George H. Sullivan*	" 30, 1921
749	Helen B. Morse*	" 30, 1921
718	Winifred A. Golden	" 30, 1923
712	Maurice F. Murphy*	" 30, 1922
690	Charles O. Halloran*	" 30, 1922

INTERMEDIATE AND ELEMENTARY SCHOOL CERTIFICATES,
EXAMINED CANDIDATES.

INTERMEDIATE CERTIFICATE.

DRAWING.

Rating.	Name.	Certificate Expires
887	Florence A. Dunbar (1)	June 30, 1924
827	Bessie E. Kennedy (2)	" 30, 1924
818	Frances L. Eager (3)	" 30, 1925
810	Edith M. Snow (4)	" 30, 1924

ENGLISH.

Men.

741	Ernest W. Anderson† (5)	June 30, 1924
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Women.

904	Winifred H. Nash† (6)	June 30, 1924
893	Elizabeth G. Diman (7)	" 30, 1925
811	Angela M. Pearce (8)	" 30, 1925

* Holds Elementary School Special Certificate.

† Holds Elementary School, Class A certificate.

MINOR SUBJECTS:

- | | |
|---------------------------------|-------------------------------------|
| (1) English, History-Geography. | (5) History-Geography, Latin. |
| (2) English, Music. | (6) German, Music. |
| (3) Mathematics, Science. | (7) Mathematics, History-Geography. |
| (4) History-Geography, Music. | (8) Mathematics, Latin. |

Intermediate and Elementary Certificates, Examined Candidates (Continued).

Rating.	Name.	Certificate Expires
779	Florence M. Murphy* (9)	June 30, 1925
768	Mary R. Quinn* (10)	" 30, 1925
764	Clara E. Oakman* (11)	" 30, 1924

HISTORY — GEOGRAPHY.

796	John P. McEleney (12)	June 30, 1925
783	Ona I. Nolan* (13)	" 30, 1924

MATHEMATICS.

780	Helen G. McKenna* (14)	June 30, 1924
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MUSIC.

824	Jennie M. Henderson (15)	June 30, 1925
813	Anna M. Niland* (16)	" 30, 1925

SCIENCE.

Men.

827	John L. Mayer (17)	June 30, 1924
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Women.

708	Bertha C. Quinnam* (18)	June 30, 1924
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ELEMENTARY SCHOOL, CLASS A CERTIFICATE.

(Issued Prior to 1918.)

Men.

818	Valentine F. Dunn	June 30, 1922
796	Thomas L. Mea	" 30, 1922
790	George L. McKinnon	" 30, 1923
790	A. Irvin Studley	" 30, 1922
774	Thomas F. McHugh	" 30, 1921
772	James L. Early	" 30, 1922
768	Robert B. Houghton	" 30, 1923
738	William L. MacDonald	" 30, 1922
723	John O. H. Shields	" 30, 1922

ELEMENTARY SCHOOL, CLASS B CERTIFICATE.

862	Joanna M. Kilmain†	June 30, 1925
839	Eva V. Adelson†	" 30, 1925
814	Mary J. Deegan†	" 30, 1925
808	Sara Rice†	" 30, 1925

* Holds Elementary School, Class A certificate.

† Certificate covers first six grades only.

MINOR SUBJECTS:

- | | |
|--------------------------------------|---------------------------------|
| (9) Mathematics, Drawing. | (14) Drawing, Music. |
| (10) Mathematics, History-Geography. | (15) English, French. |
| (11) French, Music. | (16) English, Drawing. |
| (12) Mathematics, Latin. | (17) History-Geography, German. |
| (13) English, Science. | (18) French, Drawing. |

Intermediate and Elementary Certificates, Examined Candidates

(Concluded).

Rating.	Name.	Certificate Expires
782	Agnes F. Cullen†	June 30, 1925
777	Julia A. Barrett†	" 30, 1925
774	Olive W. Taylor*	" 30, 1920
772	Clara H. Franke	" 30, 1921
768	Emma A. Sellew†	" 30, 1925
767	Hilda F. Russell	" 30, 1920
761	Martha Reid French	" 30, 1922
761	Rose A. Lewis†	" 30, 1925
755	Ellen L. Welch	" 30, 1920
752	Marion Turner†	" 30, 1925
751	Ruth E. Delano†	" 30, 1925
746	Helen L. Clausmeyer†	" 30, 1925
739	Dorothy W. Farnham	" 30, 1923
735	Elinor G. Cowan	" 30, 1921
735	Viola W. Hume	" 30, 1923
735	Mary E. McLean†	" 30, 1925
734	Lena Seitlin	" 30, 1922
733	Mary W. O'Brien†	" 30, 1925
732	Mary O. Duvall	" 30, 1923
731	Josephine B. Gilson†	" 30, 1921
731	J. Irene E. Kelley†	" 30, 1924
726	Kate E. Coggin†	" 30, 1920
726	Anna G. MacMahon	" 30, 1922
724	Gladys P. Douglas	" 30, 1922
718	Bessie I. Breslasky†	" 30, 1924
716	Catherine A. Grealis	" 30, 1923
715	Margaret M. Joyce†	" 30, 1924
713	Mary St. A. Casey	" 30, 1922
711	Adelina G. Misite†	" 30, 1925
710	Gladys F. Burnham	" 30, 1920
707	Marion L. Downey	" 30, 1922
705	Isabel F. Sullivan†	" 30, 1924
704	Ethel R. Epstein†	" 30, 1925
701	Nellie K. Bishop	" 30, 1922
701	Alice M. Sullivan	" 30, 1923
700	Catharine I. Farrell†	" 30, 1925
700	Marion E. Gallagher†	" 30, 1925
700	George F. Hopkins	" 30, 1920

KINDERGARTEN CERTIFICATES.

NORMAL, KINDERGARTEN-PRIMARY CERTIFICATE, CLASS OF 1919, AND
OTHERS AS INDICATED.

Rating.	Name.	Certificate Expires
833	Helen Weisman	June 30, 1925
794	Mary C. Turnbull	" 30, 1925

* Holds Elementary School, Class A certificate.

† Certificate covers first six grades only.

Kindergarten Certificates (Concluded).

Rating.	Name.	Certificate Expires
793	Consuelo S. Sedley	June 30, 1925
792	Mary A. Galligan	" 30, 1925
791	Elizabeth A. Millerick	" 30, 1925
791	Gertrude L. Sullivan	" 30, 1925
783	Ruth A. Bulger	" 30, 1925
781	Elise W. Thurston	" 30, 1925
779	Emma V. Thomas	" 30, 1925
775	Marjorie S. Horne (Class of 1918)	" 30, 1924
774	Irene M. Foster	" 30, 1925

NORMAL, KINDERGARTEN-PRIMARY CERTIFICATES, PRIOR TO 1919.

Rating.	Name.	Certificate Expires
831	Dorothy M. Burnham	June 30, 1924
827	Marion E. Puttner	" 30, 1924
814	Dorothy M. Tatum	" 30, 1924
771	Mary Miley	" 30, 1924

KINDERGARTEN CERTIFICATES.*Examined Candidates.*

Rating.	Name.	Certificate Expires
864	Lucy C. Washburn	June 30, 1924
862	Helen G. Herron	" 30, 1924
759	Mildred W. Keith	" 30, 1922
758	Eleanor G. McGrath	" 30, 1923
757	Helen M. Coleman	" 30, 1924
757	Mildred J. Hannon	" 30, 1923
755	Sarah G. Maguire	" 30, 1923
753	Ethel E. Strout	" 30, 1922
751	M. Isabel Sullivan	" 30, 1924
750	Euphemia D. Christie	" 30, 1922
744	Irene H. Norris	" 30, 1924
735	Elizabeth Cashman	" 30, 1924
735	Anastasia C. McCarthy	" 30, 1922
734	Helen Mahoney	" 30, 1922
725	Mildred C. Goode	" 30, 1924
723	Louise V. Tivnan	" 30, 1922
720	Bertha K. Rice	" 30, 1922
715	Emily F. McLaughlin	" 30, 1924
710	Katherine A. Jackson	" 30, 1922
703	Alice G. Muldoon	" 30, 1924
702	Isabel E. Olney	" 30, 1924
700	Madeleine C. Hayes	" 30, 1924

SPECIAL CERTIFICATES VALID IN DAY ELEMENTARY SCHOOLS.**COOKERY.**

Rating.	Name.	Certificate Expires
871	Fannie C. Bacon	June 30, 1922
847	Lucy H. Nash	" 30, 1925

Special Certificates Valid in Day Elementary Schools (Concluded).

Rating.	Name.	Certificate Expires
813	Miriam E. Priest	June 30, 1922
797	Dorothea N. Rice	" 30, 1925
794	Harriet B. Davis	" 30, 1922
768	Elizabeth A. Marsh	" 30, 1922
719	Dorothy M. Davol	" 30, 1925

SEWING.

906	Jessie Guttentag	June 30, 1925
831	Grace E. Jones	" 30, 1925
793	Eveline B. Cook	" 30, 1925
786	Gertrude P. Gordon	" 30, 1925
780	Madelon F. Lawrence	" 30, 1924
767	Leila E. Hunton	" 30, 1922
764	Genevieve M. Conroy	" 30, 1922
739	Annie V. Tracy	" 30, 1920
727	Beatrice G. Coyle	" 30, 1922
723	Margaret E. Minton	" 30, 1922
715	Margaret M. Casey	" 30, 1922
708	Mary A. Griffin	" 30, 1921

MANUAL TRAINING.**FOREMAN, SHOP WORK.**

813	William E. O'Connor	June 30, 1925
706	Harold P. Johnson	" 30, 1925

ASSISTANT INSTRUCTORS.**MEN.**

780	John Black, Jr.	June 30, 1920
750	Fred E. Fossett	" 30, 1920

WOMEN.

717	Marion C. Donelson	June 30, 1925
712	Myldred Moore	" 30, 1921

MODELING.

816	L. Reginald Chandler	June 30, 1922
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PREVOCATIONAL ACADEMIC.

812	I. Virginia Lyons	June 30, 1924
802	Sadie M. Knight	" 30, 1924

SPECIAL CLASS CERTIFICATES.**FIRST ASSISTANT IN CHARGE.**

Rating.	Name.	Certificate Expires
726	Florence E. Hosmer	June 30, 1924

INSTRUCTORS.

872	Alice S. Kenyon	June 30, 1925
854	Marion G. Cashman	" 30, 1925

Special Class Certificates (Concluded).

Rating.	Name.	Certificate Expires
828	Elizabeth J. King	June 30, 1925
817	Harriet E. Gage	" 30, 1920
813	Beulah O. Berry	" 30, 1925
783	Grace H. K. Jarvis	" 30, 1925
755	Mildred A. Bradley	" 30, 1925
737	Katherine A. Kenney	" 30, 1925

CONTINUATION SCHOOL CERTIFICATE.**ASSISTANTS.**

Rating.	Name.	Certificate Expires
	<i>Men.</i>	
758	John J. Lally	June 30, 1922
753	Joseph H. Gildea	" 30, 1925
719	Irving O. Scott	" 30, 1921

Women.

909	Anna M. Killion	June 30, 1925
864	Julia E. Fletcher	" 30, 1925
862	Josephine Shanahan	" 30, 1925
856	Mary E. Flaharan	" 30, 1925
855	Julia A. Barrett	" 30, 1925
855	Grace D. Fisher	" 30, 1924
854	Dorothy C. O'Connor	" 30, 1924
836	M. Elizabeth Gay	" 30, 1925
823	M. Theresa O'Hare	" 30, 1924
820	Mary A. Kennedy	" 30, 1925
820	Mary C. Murphy	" 30, 1923
816	Emma A. Sellew	" 30, 1923
814	Anastasia K. White	" 30, 1924
809	Edith E. Bennett	" 30, 1921
808	Margaret M. Casey	" 30, 1924
774	Elizabeth H. Flaharan	" 30, 1925
755	Agnes C. Lavery	" 30, 1922
740	Anna M. Bagley	" 30, 1921
720	Josephine F. Hagarty	" 30, 1923
711	Mary C. Hawkes	" 30, 1921

DAY AND EVENING INDUSTRIAL SCHOOLS CERTIFICATES.

XXX. (SHOP INSTRUCTORS, HELPERS AND TRADE ASSISTANTS IN DAY OR EVENING INDUSTRIAL, CONTINUATION, INTERMEDIATE, OR PRE-VOCATIONAL SCHOOLS OR CLASSES) AND XXXI. (TECHNICAL INSTRUCTORS).

BOOKBINDING.

Rating.	Name.	Certificate Expires
727	Arthur L. Haverty	June 30, 1921

Day and Evening Industrial Schools Certificates (Continued).

CABINETMAKING.

Rating.	Name.	Certificate Expires
833	Frederick C. Ritchie	June 30, 1922
829	John J. McCarthy	" 30, 1921
781	Fred J. Thorburn	" 30, 1921
767	Charles J. Rodgers	" 30, 1924

CARPENTRY.

792	Gustaf A. Johnson	June 30, 1921
786	Alfred M. Borden, Jr.	" 30, 1921
784	George F. Pushee	" 30, 1922
780	Jesse J. Maguire	" 30, 1921

DRAFTING.

822	Percy R. Finer	June 30, 1921
787	Harold J. Miller*	" 30, 1922
786	Arthur E. Spencer	" 30, 1921

DRESSMAKING.

839	Helen F. Morton	June 30, 1921
804	Gwendolyn A. Summers	" 30, 1922
801	Kathryn Whalen	" 30, 1925
790	Mary A. O'Brien*	" 30, 1923
773	Annie L. Robertson	" 30, 1924
744	Edith A. Sikora*	" 30, 1922

ELECTRICITY.

852	M. Alonzo Eason*	June 30, 1922
824	Ernest F. Lawrence	" 30, 1922
819	Nils Engstrom	" 30, 1923
764	George G. Noren	" 30, 1925
751	W. Russell Parker	" 30, 1921
730	Francis R. Sheehan	" 30, 1925

MACHINE SHOP PRACTICE.

876	Charles E. Dawson	June 30, 1923
860	Francis J. Lee	" 30, 1925
843	Hugh Wilton	" 30, 1922
824	Henry S. Crosby	" 30, 1921
801	Frank Mullen	" 30, 1921
782	William Buxbaum	" 30, 1921
771	Charles A. T. Kerr	" 30, 1921
740	Arthur H. Farrell	" 30, 1921
734	Charles Laird	" 30, 1925
725	Hugh J. Eisenhauer	" 30, 1924
715	Royal R. Eglinton	" 30, 1921

* Holds XXXI. (Technical Instructor) certificate only.

Day and Evening Industrial Schools Certificates (Continued).

MILLINERY.		
Rating.	Name.	Certificate Expires
875	Alice A. Alden	June 30, 1923
851	Lily W. Jewett	" 30, 1925
701	Annie J. Herring	" 30, 1921

PATTERN MAKING.		
923	Harry H. Tukey	June 30, 1922
829	George S. Clarkson	" 30, 1921
827	James B. Cummings	" 30, 1922
785	John Black, Jr.	" 30, 1922

PLUMBING.		
879	James A. Sullivan	June 30, 1921
813	John J. Downey	" 30, 1921

PRINTING.		
915	Richard V. Barry	June 30, 1925
885	Charles R. Forbes	" 30, 1923
841	Ralph L. Boudreau	" 30, 1923
831	John B. Martell	" 30, 1923
824	James Robinson	" 30, 1920
750	Ralph W. Hadley	" 30, 1925
738	Thomas F. Woods	" 30, 1924
729	Charles M. Doherty	" 30, 1924

SHEET METAL WORK.		
940	Andrew J. Leahy	June 30, 1924
740	Arthur E. Olsen	" 30, 1925

XXXI.—A. (HEADS OF DEPARTMENTS (SHOP WORK) IN THE TRADE SCHOOL FOR GIRLS, AND SHOP FOREMEN IN DAY OR EVENING INDUSTRIAL, CONTINUATION, INTERMEDIATE, OR PREVOCATIONAL SCHOOLS OR CLASSES.)

CABINETMAKING.		
Rating.	Name.	Certificate Expires
783	Alden T. Stubbs	June 30, 1925

ELECTRICITY.		
727	Louis E. Levy	June 30, 1925

MACHINE SHOP PRACTICE.		
818	Abraham S. Bernstein	June 30, 1925
757	Carl E. Janson	" 30, 1925
736	William J. Doherty	" 30, 1925
735	Grover C. Russell	" 30, 1925

PRINTING.		
751	William P. Grady	June 30, 1925
712	Frederick G. E. Zeidler	" 30, 1925

Day and Evening Industrial Schools Certificates (*Concluded*).

XXXI.—B. (DIVISION HEADS AND SHOP SUPERINTENDENT IN THE BOSTON TRADE SCHOOL, COÖPERATIVE INSTRUCTORS AND COÖRDINATORS IN DAY HIGH SCHOOLS, AND DIVISION FOREMEN IN THE CONTINUATION SCHOOL.)

CABINETMAKING.

Rating.	Name.	Certificate Expires
789	Arlon O. Bacon	June 30, 1925

XXXII.—A.—([a] INSTRUCTORS IN THE BOSTON TRADE SCHOOL AND VOCATIONAL ASSISTANTS IN INDUSTRIAL OR CONTINUATION SCHOOLS.)

Men.

Rating.	Name.	Certificate Expires
806	Russell B. Leonard	June 30, 1921

Women.

896	Eva L. Morley	June 30, 1921
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XXXII.—A.—([b] INSTRUCTORS, BOYS' CLASSES, IN THE CONTINUATION SCHOOL.)

Rating.	Name.	Certificate Expires
805	William V. McKenney	June 30, 1925
800	James A. Dunbar	" 30, 1925
794	Irving J. Heath	" 30, 1925
757	Charles O. Halloran	" 30, 1925
723	Ernest W. Anderson	" 30, 1925
717	Joseph A. Mahoney	" 30, 1925

XXXIV. DAY AND EVENING INDUSTRIAL SCHOOLS
CERTIFICATE.

PHYSICAL TRAINING.

Rating.	Name.	Certificate Expires
821	Alice B. Felton	June 30, 1924

ASSISTANT IN MANUAL ARTS CERTIFICATE.

DRAWING.

Rating.	Name.	Certificate Expires
848	Flora L. Enright	June 30, 1925
819	Margaret Lovell	" 30, 1920
814	Annette M. Lavoie	" 30, 1924
780	Amy E. Adams	" 30, 1924
755	Charlotte I. Lewis	" 30, 1920
740	Josephine G. Malone	" 30, 1924

ASSISTANT IN MUSIC CERTIFICATE.

Rating.	Name.	Certificate Expires
726	Doris A. Melchert	June 30, 1925

INSTRUCTOR OR ASSISTANT INSTRUCTOR OF MILITARY
DRILL CERTIFICATE.

Rating.	Name.	Certificate Expires
849	Forrest B. Moulton*	June 30, 1925
839	Joseph McK. Driscoll	" 30, 1925
813	Daniel J. Canty	" 30, 1921
797	James J. Kelley	" 30, 1925
792	Robert A. O'Neill	" 30, 1925
781	William J. McCluskey	" 30, 1925
753	George F. A. Mulcahy	" 30, 1925

SCHOOL NURSE CERTIFICATE.

Rating.	Name.	Certificate Expires
862	Margaret C. Murphy	June 30, 1921
856	Margaret Packard Brown	" 30, 1921
852	Mary E. Hines	" 30, 1921
840	Inez W. Nichols	" 30, 1921
829	Edith C. Baldwin	" 30, 1922
824	Eunice Stegmann Carter	" 30, 1920
824	Annie K. Gillies	" 30, 1921
820	Ruth E. Hawkins	" 30, 1921
807	Barbara R. Zimmerman	" 30, 1921
805	Alice E. Hughes	" 30, 1921
804	Theresa A. Dolan	" 30, 1925
798	Mary E. Macdonald	" 30, 1921
795	Mary E. Murray	" 30, 1921
786	Christine E. Sweeney	" 30, 1924
783	Mary F. Johnson	" 30, 1921
778	Sarah M. Waterman	" 30, 1920
774	Hulda Cederstrom	" 30, 1925
763	Margaret E. Crockstad	" 30, 1923
749	Mildred V. Prescott	" 30, 1925
734	Olive M. Houghton	" 30, 1923
727	Helen C. Riley	" 30, 1922
722	Genevieve E. Hiney	" 30, 1922
719	Margaret E. Cullen	" 30, 1922
713	Helena M. Howard	" 30, 1922
711	Esther I. Cooper	" 30, 1920
700	Dora E. Manning	" 30, 1925
679	Adaline Tucker Bradley	" 30, 1920

* Eligible for appointment as Instructor of Military Drill only.

* FIRST RATED LIST OF CANDIDATES ELIGIBLE FOR APPOINTMENT TO THE RANK OF PRINCIPAL OF A DAY ELEMENTARY OR DAY INTERMEDIATE SCHOOL.

Men.

Rating.	Name.	Rating.	Name.
881	Clarence H. Jones.	770	Henry E. Loring.
875	James A. Crowley.	765	Frederick J. Murphy.
874	Edgar L. Raub.	764	William R. Kramer.
863	Alvin P. Wagg.	760	Joseph A. F. O'Neil.
847	Hugh J. McElaney.	{ 757	Everett L. Getchell.
838	Chester H. Wilbar.	{ 757	Theobald A. Lynch.
829	John C. Riley.	752	Edward J. Carroll.
820	Charles I. Gates.	749	William T. Miller.
818	Roger A. Powers.	745	Irving M. Norcross.
800	John J. Maloney.	743	Edward J. Muldoon.
792	Charles G. Wetherbee.	733	Allan L. Sedley.
789	Frederick A. Guindon.	725	Thomas J. Barry.
776	James T. Donovan.		

Women.

907	Mary E. Keyes.	797	Charlotte Rafter.
850	Alice G. Maguire.	789	Louise A. Pieper.
842	E. Gertrude Dudley.	783	Katherine C. McDonnell.
831	Madeline B. Driscoll.	774	Emma F. Jenkins.
822	Lotta A. Clark.	735	Emma E. Lawrence.
818	Mabel E. Adams.	731	Selina A. Black.

* The names of candidates who received a rating of less than 725 out of maximum of 1,000 points are not published.

ALPHABETIC LIST OF CANDIDATES.

(Unless otherwise indicated, all addresses are in Massachusetts.)

A.

	PAGE
Adams, Amy E.....	.5 Jefferson street, Newton 35
Mabel E.....	.38 Percival street, Dorchester 37
Adelson, Eva V.....	.12 Harlem street, Dorchester 28
Alden, Alice A.....	.22 Freeman street, Arlington 34
Allbee, Angie G.....	.162 Gregory avenue, Passaic, N. J. 15
Anderson, Ernest W.....	.64 Fulton street, Medford 27, 35
Armstrong, Mary G.....	.561 East Fifth street, South Boston 27
Ashton, Willa M.....	.71 Glendale street, Everett 25
Atwood, Walter S.....	.Box 41, Hyannis 12
Austin, May M.....	.Portland, Conn. 16

B.

Bacon, Arlon O.....	.15 Regina road, Dorchester 35
Fannie C.....	.3 Bacon place, Newton Upper Falls 30
Bagley, Anna M.....	.89 Robbins street, Waltham 32
Baker, Howard B.....	.93 Comstock avenue, Providence, R. I. 14
Kenrick M.....	.53 Wendell avenue, Brockton 17
Baldwin, Edith C.....	.109 Queensberry street 36
Barden, Elizabeth M.....	.7 Dell avenue, Hyde Park 13
Barker, Susan B.....	.66 Capen street, Dorchester 25
Barr, Katharine E.....	.139 Highland street, Roxbury 15
Barrett, Julia A.....	.40 Prospect avenue, Norwood 29, 32
Barry, Ellen A.....	.813 Beacon street 13
Jane U.....	.23 Medford street, Charlestown 24
Mary P.....	.56 Rockview street, Jamaica Plain 16
Richard V.....	.29 Bellflower street, Dorchester 34
Thomas J.....	.37 Edison Green, Dorchester 37
Barth, Jessie L.....	.24 Nottingham street, Dorchester 24
Bartlett, Elizabeth M. P.....	.9 Jefferson Hall, Trinity Court 16
Battles, Earl W.....	.4 Story terrace, Marblehead 15
Beatley, Bancroft.....	.11 Wabon street, Roxbury 14
Catherine B.....	.11 Wabon street, Roxbury 13
Belinsky, Annie S.....	.12 Lorne street, Dorchester 24
Bennett, Edith E.....	.9 Nottingham street, Dorchester 12, 32
Benson, Agnes L.....	.72 Tremont street, Brighton 25
Ulrika E.....	.24 Oliver street, Everett 15
Bergin, John A.....	.16 Upland road, North Cambridge 12
Bernstein, Abraham S.....	.43 Chambers street 34
Berry, Beulah O.....	.62 Sawyer avenue, Dorchester 32
Beveridge, Olive A.....	.16 Nixon street, Dorchester 13
Billings, Constance.....	.22 Burroughs street, Jamaica Plain 19, 24
Flora E.....	.887 Washington street, Canton 13
Bird, Herbert C.....	.29 Monmouth street, East Boston 20, 26
Bishop, Nellie K.....	.56 Seaver street, Wellesley Hills 29
Black, John, Jr.....	.Box 311, Cohasset 31, 34
Selina A.....	.79 Willow avenue, West Somerville 37
Blodgett, Guy C.....	.92 Belmont street, Somerville 14
Blount, Henry G.....	.Charleston, Me. 15

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Bond, Philip J.....	104 Geneva avenue, Dorchester 19
Borden, Alfred M., Jr.....	50 Coral street, Fall River 33
Borré, Louise M.....	10 Humphreys street, Dorchester 23
Boudreau, Ralph L.....	32 Bayfield road, Atlantic 34
Boyan, John J.....	175 Princeton street, East Boston 14
Boyhan, Mary J.....	52 Bennington street, Newton 24
Bradford, Edith H.....	272 Summer street, West Somerville 13
Bradley, Adaline Tucker.....	788 Broadway, South Boston 36
Mildred A.....	11 Quint avenue, Allston 32
Bragdon, Ralph H.....	123 North avenue, North Abington 15
Brennan, Agnes C.....	12 Knoll street, Roslindale 24
Breslasky, Bessie I.....	32 Thane street, Dorchester 29
Brewster, Marie L.....	464 Washington street, Dorchester 16
Broaders, Clyde M.....	35 Florence street, Medford 25
Brogan, Mary C.....	192 Grant avenue, Medford 20
Brophy, Alice A.....	58 Eliot street, Jamaica Plain 13
Brown, Margaret Packard.....	34 South avenue, Melrose Highlands 36
Bulger, Ruth A.....	174 Third street, South Boston 21, 30
Burke, Abigail F.....	14 Mark street, Roxbury 25
Helen K.....	11 Auburn street, Roxbury 24
Katharine J.....	61 East Concord street 16
Burnce, Frances.....	76 Allen street 13, 19
Burnham, Dorothy M.....	185 Poplar street, Roslindale 26, 30
Gladys F.....	Washington street, Topsfield 29
Burns, Katherine C.....	30 Whiting street, Roxbury 26
Thomas P.....	32 Callender street, Dorchester 27
Burrage, Constance E.....	Weston 15
Buxbaum, William.....	1139 Commonwealth avenue, Allston 33

C.

Cadwell, Floralyn.....	11 East Newton street 13
Cahill, Marguerite A.....	19 Greenwood avenue, Jamaica Plain 17
Mary A.....	313 Prospect street, Cambridge 12
Calderara, Josephine M.....	12 East Union street, Milford, N. H. 20, 22
Callaghan, Agnes L.....	122 Main street, Haverhill 14
Campbell, Helen T.....	66 Bowdoin avenue, Dorchester 19
Mary A.....	208 Hampden street, Roxbury 23
Canney, Margaret A.....	450 Main street, Charlestown 22
Canty, Daniel J.....	28 Highland street, Roxbury 36
Carangelo, Louise F.....	281 Revere street, Revere 26
Carey, Helen.....	15 Allen street 27
Carroll, Edward J.....	202 West Seventh street, South Boston 37
James H.....	St. Thomas College, St. Paul, Minn. 14
Mary J.....	17 Old Harbor street, South Boston 22
Mary M.....	18 Devens street, Charlestown 25
Carter, Eunice Stegmann.....	21 Russell terrace, Arlington 36
Casey, Margaret M.....	89 Cedar street, Roxbury 32
Margaret M.....	79 Howland street, Roxbury 31
Mary St. A.....	15 Wales street, Dorchester 29
Cashman, Elizabeth.....	33 Woodland street, Newburyport 30
Marion G.....	94 Princeton street, East Boston 31
Cauley, Mary W.....	21 Athelwold street, Dorchester 18
Cavanaugh, Mary F.....	27 Parkland street, Brighton 24
Cederstrom, Hulda.....	33 Kerwin street, Dorchester 36
Chandler, Elizabeth.....	27 Fairmount street, Brookline 21
L. Reginald.....	489 Common street, Belmont 31
Christie, Euphemia D.....	374A Centre street, Jamaica Plain 30
Clark, Lotta A.....	41 Commonwealth avenue, Chestnut Hill 37
Clarkson, George S.....	53 Stark road, Worcester 34
Clausmeyer, Helen L.....	216 Temple street, West Roxbury 29
Cogan, Matilda E.....	61 Farragut road, South Boston 17

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Coggin, Kate E.....	37 Wilfred street, West Lynn 29
Cohen, Sarah E.....	9 Garden street, Roxbury 24
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O'Neil, Edith M.....	86 Medford street, Charlestown 24
Joseph A. F.....	78 Sumner street, Dorchester 37
O'Neill, Robert A.....	12 Roseland street, Dorchester 36
Osborne, Mary F.....	67 Boston street, Somerville 12
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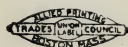
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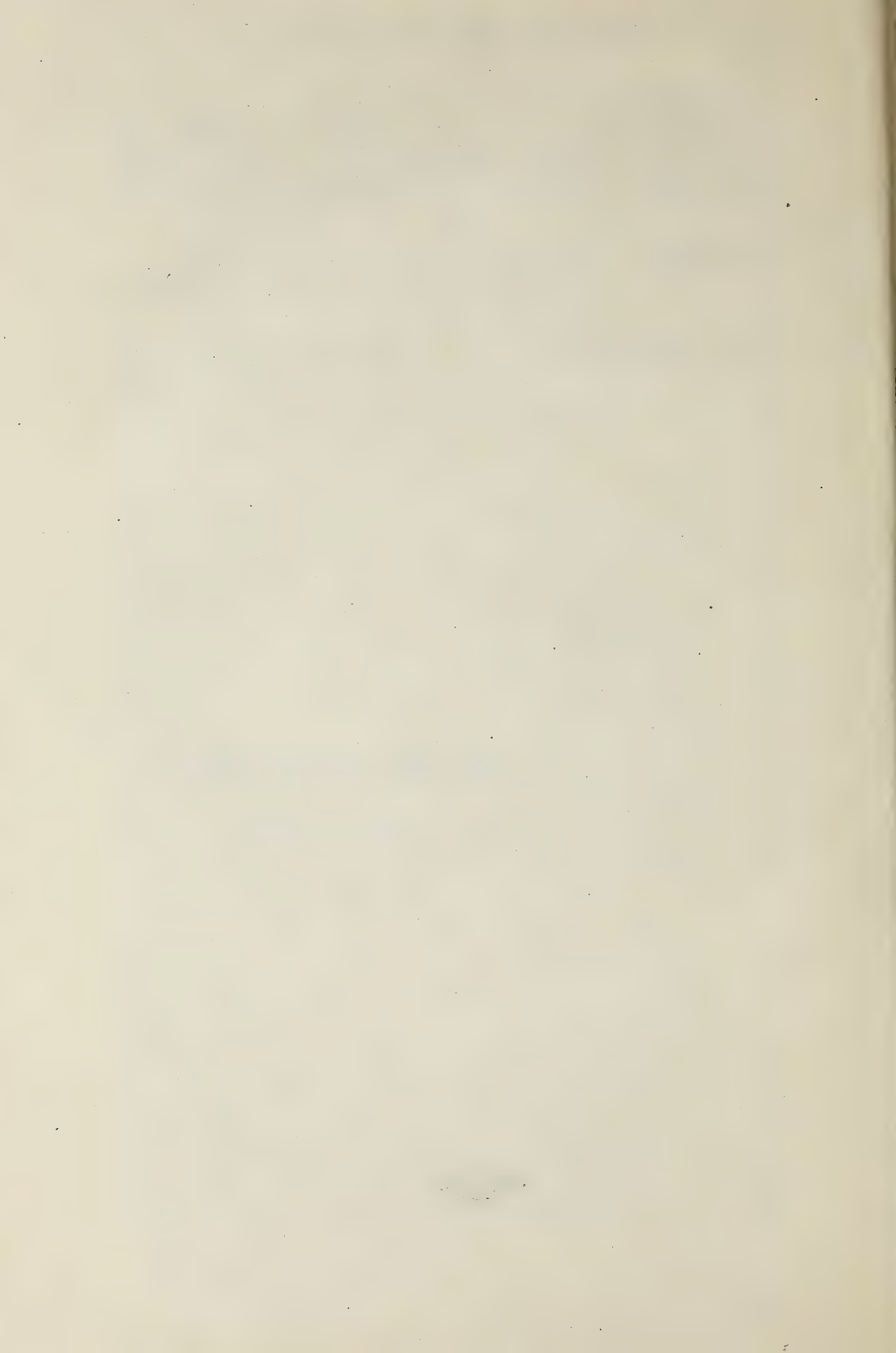
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SCHOOL DOCUMENT NO. 15—1919
BOSTON PUBLIC SCHOOLS

COURSES OF STUDY WITH
MECHANIC ARTS, FOR
BOYS, AND PRACTICAL
ARTS, FOR GIRLS

FOR INTERMEDIATE SCHOOLS AND CLASSES



BOSTON
PRINTING DEPARTMENT
1919

IN SCHOOL COMMITTEE, BOSTON, June 23, 1919.

Adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

INTERMEDIATE SCHOOL COURSE WITH MECHANIC ARTS, GRADES VII AND VIII (FOR BOYS).

	VII.	VIII.	Totals.	Diploma Points.	Prepared Lessons.	Unpre- pared Lessons.
Unprepared subjects (1 diploma point based on 120 minutes):						
Either one ¹ { Drawing.....	60	60	120	1	None	All
{ Science.....	60	60	120	1	None	All
Mechanic Arts ²	420	420	840	4	None	All
Music.....	60	60	120	1	None	All
Physical Training ³	75	75	150	.....	None	All
Penmanship ⁴	30	30	60	1	None	All
Hygiene.....	60	60	120	1	None	All
Prepared subjects (1 diploma point based on 80 minutes):						
English.....	300	300	600	5	8	12
Composition, oral and written; reading and literature; spelling.						
Mathematics.....	180	180	360	4	8	4
Geography.....	150	150	300	3	4	6
History.....	120	120	240	2	4	4
Recesses ⁵						
Opening exercises.....						

¹ Pupils should be given an opportunity to elect either drawing or science at the beginning of the seventh grade and should then continue that study through the eighth grade; otherwise, no diploma credit can be allowed for such work. Every school is expected to offer instruction in drawing and science, but no one pupil in any school will take both subjects.

² Possible offerings in mechanic arts: The offerings in a given school may be selected from the projects listed on page 4, subject in every case to the facilities of the building and the local interests. The shop work in each case is to be accompanied by mechanical drawing appropriate to the activity.

³ This amount of time varies. It is understood that if pupils are in a shop in the morning when the six minutes are devoted to setting-up exercises, or in the afternoon when other pupils have their physical training, they are to be excused from such physical training exercises.

⁴ Diploma point conditional upon the earning of a penmanship diploma.

⁵ It is understood that pupils will not have recess on sessions when they are in shop.

OPTIONS IN MECHANIC ARTS.

Woodworking.— Consisting of bench-work and use of lathe, jointer, band-saw, circular saw, and mortiser; making boxes, cabinets, furniture, materials for special classes and playgrounds, etc.

Bookbinding.— Involving cutting, gluing, pasting, sewing, operating simple machines, making blocks of paper, notebooks, Harvard covers, pasteboard boxes and binding and rebinding books.

Machine Shop Work.— Consisting of laying out, chipping, filing, polishing and drilling; and use of speed lathe, engine lathe, milling machine shaper and grinders. Making nail sets, countersinks, screw drivers, surface gauges, trammel points, small hammers, calipers, parts of equipment, etc.

Printing.— Involving study of the case, designing, styles of type, composing and press work in getting out business cards, announcements, fliers, programs, stationery, office forms, pamphlets, etc.

Electricity.— Consisting of wiring for bells, lights, annunciators, door openers, etc., working with moldings, conduits and cables; using single and double pole, switches and circuit electroliers.

Sheet Metal Work.— Involving the making of flat, rectangular, cylindrical and conical type forms, as found among kitchen utensils; and larger problems such as pipe work, pans, coal hods, etc.

Painting.— Including study of materials and their preparation, show card lettering, sign painting, inside and outside painting, staining and finishing of woodwork, etc.

Gardening.— Consisting of preparation of soil, selection and testing of seeds, planting, transplanting, cultivating, caring for, and harvesting crops; work in school garden with use of cold frames and hotbeds.

SHOP EQUIPMENT.

For the purposes of this course, four or more different shops, representing different basic activities, are desirable

but it is possible to equip two shops so as to accomplish this purpose. The shop activities and combinations will depend upon local and neighboring conditions and the possibility of securing equipment.

Each district has now at least one woodworking shop which may be further equipped as money is available. Where it is impossible to secure additional shop facilities within the district, an attempt will be made to arrange for the use of shops in adjoining districts or in a high school.

Applications for additional shop facilities in or out of the district should be made to the First Assistant Director of Manual Arts, who will take the necessary steps to procure them at as early a date as conditions will allow.

The courses of study in the four prepared subjects in Grades VII and VIII are the same for pupils pursuing intensified shop work as for other pupils in intermediate schools. Of course, it is expected that the work in every line of school activity shall be correlated and shop work is no exception. The problems of the shop should be brought into the arithmetic class and *vice versa*. This is true of all subjects.

PURPOSE OF THE COURSE.

This course is intended primarily for those pupils especially interested in the industries who do not expect to continue in school beyond the eighth or ninth year or who expect to enter later either the Mechanic Arts High School, a coöperative course in a general high school, or the Boston Trade School. The course is so arranged that pupils who begin it may transfer to the mathematics or clerical course with a limited amount of adjustment in case they later desire to continue in a general high school. Pupils who elect this course may be transferred to the Mechanic Arts High School, or a coöperative course in a general high school at the end

of the eighth grade, or to the Boston Trade School whenever they reach fourteen years of age, preferably at the completion of the eighth grade.

That the course may be of the greatest vocational significance, provision will be made wherever possible for the rotation of classes through at least four activities, the divisions changing each half-year in September and February.

INTERMEDIATE SCHOOL COURSE WITH MECHANIC ARTS, GRADE IX (FOR BOYS).

SUBJECT REQUIRED.	Number of 30-minute Periods per Week.	High School Diploma Points.
Art appreciation.....	2	1
Choral practice.....	1	1
Hygiene-physiology.....	1	1
Physical training	3	2
English.....	7	5
Mechanic arts ²	15	5
Industrial Boston and civics.....	4	3
ELECTIVE. (Select one).		
Related mathematics.....	5	4
Applied science.....	4	3

¹ This amount of time varies. It is understood that if pupils are in a shop in the morning when the six minutes are devoted to setting-up exercises, or in the afternoon when other pupils have their physical training, they are to be excused from such physical training exercises.

² Advanced work throughout the year in one activity. (See list, Mechanic Arts course, for Grades VII and VIII.)

It is understood that pupils will not have recess on sessions when they are in shop.

From Grade IX pupils may enter the tenth year of an industrial business course, the Boston Trade School, or go into industry with advanced standing.

INTERMEDIATE SCHOOL COURSE WITH PRACTICAL ARTS, GRADES VII AND VIII (FOR GIRLS).

	VII.	VIII.	Totals.	Diploma Points.	Prepared Lessons.	Unprepared Lessons.
Unprepared subjects (1 diploma point based on 120 minutes).						
Either one ¹ { Drawing.....	60	60	120	1	None	All
{ Science.....	60	60	120	1	None	All
Practical Arts ²	420	420	840	4	None	All
Music.....	60	60	120	1	None	All
Physical Training ³	75	75	150	.....	None	All
Penmanship ⁴	30	30	60	1	None	All
Hygiene.....	60	60	120	1	None	All
Prepared subjects (1 diploma point based on 80 minutes).						
English.....	300	300	600	5	8	12
Composition, oral and written; reading and literature; spelling.						
Mathematics.....	180	180	360	4	8	4
Geography.....	150	150	300	3	4	6
History.....	120	120	240	2	4	4
Recesses. ⁵						
Opening exercises.....	25	25	50			

¹ Pupils should be given an opportunity to elect either drawing or science at the beginning of the seventh grade and should then continue that study through the eighth grade; otherwise, no diploma credit can be allowed for such work. Every school is expected to offer instruction in drawing and science, but no one pupil in any school will take both subjects.

² Possible offerings in practical arts: The offerings in a given school may be selected from the projects listed below, subject in every case to the facilities of the building and the local interests.

³ This amount of time varies. It is understood that if pupils are in a workroom in the morning when the six minutes are devoted to setting-up exercises, or in the afternoon when other pupils have their physical training, they are to be excused from such physical training exercises.

⁴ Diploma point conditional upon the earning of a penmanship diploma.

⁵ It is understood that pupils will not have recess on sessions when they are in workrooms.

OPTIONS IN PRACTICAL ARTS.

Home Making.—Housekeeping; sweeping, dusting, scrubbing; care of refrigerator, sink, garbage pail;

building and care of fire, care of gas and coal ranges; removing of stains and laundry work; table setting and serving.

Cooking.—Study of foods and their value; buying, preparation, cooking and serving of beverages, fruits, vegetables, cereals, milk, eggs, meat, fish, yeast and quick breads, batters and doughs, desserts, salads, sandwiches, box luncheons, camp cookery, food for invalids, preservation of foods, menu work with cooking and serving of simple home meals.

Sewing.—Study of sewing implements; application of stitches taught in Grades IV, V, and VI in making all kinds of undergarments; textile studies and values; renovating and making over of garments and household articles; use and care of the sewing machine; making infants' and children's clothing; applied design.

Gardening.—Consisting of preparation of soil, selecting and testing of seeds, planting, transplanting, cultivating, caring for and harvesting of crops; work in school garden; preserving of garden products in correlation with cookery work.

Bookbinding.—Involving cutting, gluing, pasting, sewing, operating simple machines, making blocks of paper, notebooks, Harvard covers, pasteboard boxes, and binding and rebinding books.

WORKROOM EQUIPMENT.

For the purposes of this course two different workrooms, representing different basic activities, are desirable, but it is possible to equip one workroom so as to accomplish this purpose. The workroom activities and combinations will depend upon local and neighboring conditions and the possibility of securing equipment.

Each district has now at least one cooking room, which may be further equipped as money is available. Where it is impossible to secure additional workroom facilities within a district, an attempt will be made to arrange for the use of workrooms in adjoining districts or in a high school.

Applications for additional workroom facilities in or out of the district should be made to the Director of Household Science and Arts, who will take the necessary steps to procure them at as early a date as conditions will allow.

The course of study in the four prepared studies in Grades VII and VIII are the same for pupils pursuing the practical arts as for other pupils in intermediate schools. Of course, it is expected that the work in every line of school activity shall be correlated, and the practical arts are no exception. The problems of the workroom should be brought into the arithmetic class and *vice versa*. This is true of all subjects.

PURPOSE OF THE COURSE.

This course is intended primarily for those pupils especially interested in home making or the industries, who do not expect to continue in school beyond the eighth or ninth year or who expect to enter later either the High School of Practical Arts or the Trade School for Girls. The course is so arranged that pupils who begin it may transfer to the mathematics or clerical course with a limited amount of adjustment in case they later desire to continue in a general high school. Pupils who elect this course may be transferred to the High School of Practical Arts at the end of the eighth grade or to the Trade School for Girls whenever they reach fourteen years of age. That the course may be of the greatest vocational significance and value, provision will be made wherever possible for participation in at least two activities.

INTERMEDIATE SCHOOL COURSE WITH PRACTICAL ARTS, GRADE IX (FOR GIRLS).

SUBJECT REQUIRED.	Number of 30-minute Periods per Week in Intermediate Schools.	High School Diploma Points.
Art appreciation.....	2	1
Choral practice.....	1	1
Hygiene-physiology.....	1	1
Physical training ¹	3	2
English.....	7	5
Practical arts ²	15	5
ELECTIVE. (Select two.)		
Industrial Boston and civics.....	4	3
Household mathematics.....	5	4
Applied science.....	4	3
Salesmanship.....	7	3

¹ This amount of time varies. It is understood that if pupils are in a workroom in the morning when the six minutes are devoted to setting-up exercises, or in the afternoon when other pupils have their physical training, they are to be excused from such physical training exercises.

² Advanced work throughout the year in two activities. (See list, Practical Arts course for Grades VII and VIII.)

It is understood that pupils will not have recess on sessions when they are in workrooms.

From Grade IX, pupils may enter the Trade School for Girls or go into industry with advanced standing.

SCHOOL DOCUMENT NO. 16—1919
BOSTON PUBLIC SCHOOLS
ANNUAL STATISTICS OF THE
BOSTON PUBLIC SCHOOLS

CALENDAR YEAR 1918
AND SCHOOL YEAR 1918-1919



BOSTON
PRINTING DEPARTMENT
1919

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IN SCHOOL COMMITTEE,
BOSTON, September 29, 1919.

To the School Committee:

I submit herewith the tenth annual report of the statistics of the Boston Public Schools.

The total registration in all schools during the year was 141,300; the average membership 117,532; and the average number in daily attendance, 105,485. The total registration was 3,502 less than during the school year next preceding. The total registration was distributed as follows:

Regular day schools	122,452
Evening schools	8,260
Continuation schools	9,651
Day School for Immigrants	937

The number of pupils registered in the Summer Review Schools was 4,397. This total of 4,397 is not included in the total registration because, with few exceptions, these pupils were registered in the public day schools during the term ending in June, 1919.

The Normal School showed a decrease of 32 pupils. The high and Latin schools showed a decrease of 416 pupils. The registration for the intermediate ninth grade of the elementary schools showed a total registration of 963 pupils, making a net total increase in the high and Latin schools of 547 pupils. The elementary grades (exclusive of the ninth) showed a decrease of 269 pupils. The evening schools showed a decrease of 3,694 pupils. The increases in registration throughout the city were as follows:

Kindergartens	315
Special schools	204
Continuation school	68

The average number belonging in all day schools was 106,743; an increase of 53.

The total number of principals and teachers, including the members of the supervising staff, in the employ of the city on June 30, 1919, was 3,413 — thirty-eight more than on the corresponding day of the preceding year. The Normal School had one less teacher; the day high and Latin schools one less; the day elementary grades had nine additional; the kindergartens fourteen, and the special schools seventeen. Of the total number of teachers 536 were men and 2,877 women. The average number of pupils per teacher in the Normal School was reduced from 16.3 to 15.3; the day high and Latin schools from 28.1 to 26.7; in the grades from 40.9 to 40.1, and in the kindergartens from 25.5 to 25.4.

The number of classes of special types in the day elementary schools and the number of pupils belonging at the end of the school year were as follows:

	Number of Classes.	Number Belonging.
Conservation of Eyesight Classes (semi-blind).....	5	60
Hospital Classes.....	2	42
Open-Air Classes.....	16	529
Pre-Vocational Classes.....	20	700
Rapid Advancement Classes.....	5	136
Special Classes.....	71	1,123
Special English Classes.....	5	114
Speech Improvement Classes (stammerers) (8 centers).....	49	585
Ungraded Classes.....	16	484

The detailed reports of membership and attendance of pupils assigned to the classes mentioned above are included in the total of respective districts in which they were registered.

Summer Review Schools were reopened June 30 and were continued in session six days per week up to and including August 15, 1919. There was one Summer Review High School conducted in the Roxbury High Schoolhouse. There were nine Summer Review Elementary Schools and one branch.

Following is the summary of the distribution of children of public school grade in all day schools of the city for the past six years, based on the daily average number belonging:

SCHOOL YEAR.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Public schools.....	106,549	109,223	110,990	107,153	106,690	106,743
Parochial schools.....	20,706	21,186	21,376	22,071	22,784	23,805

Respectfully submitted,

FRANK V. THOMPSON,

Superintendent of Public Schools.

GENERAL SUMMARIES.

AVERAGE MEMBERSHIP SCHOOL YEARS 1914-15 TO
1918-19.

DAY SCHOOLS.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
Normal.....	185	286	295	262	230
High and Latin.....	15,714	16,882	16,755	15,368	14,963
Elementary Grades.....	85,871	85,884	83,087	83,326	83,703
Kindergartens.....	6,598	7,014	6,180	6,879	7,059
Special Schools.....	855	924	836	855	788
Totals.....	109,223	110,990	107,153	106,690	106,743
Increase over previous year..	2,674	1,767	* 3,837	* 463	53

* Decrease.

ENROLLMENT ON JUNE 30 OF EACH OF THE LAST FIVE
YEARS.

DAY SCHOOLS.	1915.	1916.	1917.	1918.	1919.
Normal.....	181	282	289	254	277
High and Latin.....	14,612	15,276	15,074	13,612	13,516
Elementary Grades.....	85,564	85,143	83,224	82,520	81,303
Kindergartens.....	7,287	7,605	7,087	7,572	7,941
Special Schools.....	747	718	625	633	993
Totals.....	108,391	109,024	106,299	104,591	104,030

TOTAL REGISTRATION.

School Year Ending June 30, 1919.

	Boys.	Girls.	Total.
Normal.....	.....	242	242
High and Latin.....	7,856	9,137	16,993
Elementary Grades.....	49,344	45,863	95,207
Kindergartens.....	4,555	4,466	9,021
Special Schools.....	398	591	989
Totals.....	62,153	60,299	122,452

SUMMARY.

School Year Ending June 30, 1919.

SCHOOLS.	Total Registration.	Average Number Belonging.	Average Attendance.	Per Cent of Attendance.	NUMBER ENROLLED JUNE 30, 1919, OF THE FOLLOWING AGES.				
					Under 5.	5 to 7.	7 to 14.	14 to 16.	16 and over.
Normal.....	242	230	220	96	.....	.....	.....	1	226
High and Latin.....	16,993	14,963	13,800	92	.....	.....	2,726	6,730	4,359
Elementary Grades.....	95,207	83,703	75,683	90	232	15,128	63,731	3,902	226
Kindergartens.....	9,021	7,059	5,402	77	5,689	2,240	13	.....	.....
Totals.....	121,463	105,955	95,105	89	5,921	17,368	66,470	10,633	4,811
Special Schools.....	989	788	688	87	2	25	141	293	336
All Day Schools (except the Continuation School)	122,452	106,743	95,793	88	5,923	17,393	66,611	10,926	5,147
Evening High.....	4,121	2,517	2,046	81	.....	.....	.....	.....	.....
Evening Elementary.....	3,243	1,542	1,286	83	.....	.....	.....	.....	.....
Boston Trade School (Evening Classes).....	896	324	245	76	.....	.....	.....	.....	.....
Totals.....	8,260	4,383	3,577	80	.....	.....	.....	.....	.....
Continuation School.....	9,651	6,047	5,817	96	.....	.....	.....	.....	.....
Day School for Immigrants	937	359	298	83	.....	.....	.....	.....	.....
Total of all Day and Evening Schools....	141,300	117,532	105,485	89	.....	.....	.....	.....	.....

DAY SCHOOLS.

NORMAL, LATIN AND HIGH SCHOOLS.

School Year Ending June 30, 1919.

SCHOOLS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Normal.....	242	.....	230	230	.....	220	220	10	96
High and Latin:									
Public Latin.....	1,058	942	.....	942	894	.....	894	48	95
Girls' Latin.....	815	.....	731	731	.....	686	686	45	94
Brighton High.....	656	184	405	589	166	369	535	54	91
Charlestown High....	554	132	325	457	117	297	414	43	91
Dorchester High.....	2,260	632	1,385	2,017	570	1,241	1,811	206	90
East Boston High....	772	247	428	675	224	388	612	63	92
English High.....	2,186	1,881	.....	1,881	1,749	.....	1,749	132	93
Girls' High.....	2,040	.....	1,772	1,772	.....	1,588	1,588	184	90
High School of Com- merce.....	1,396	1,212	.....	1,212	1,165	.....	1,165	47	96
High School of Practi- cal Arts.....	504	.....	428	428	.....	388	388	40	90
Hyde Park High.....	749	286	396	682	265	366	631	51	93
Mechanic Arts High..	980	812	.....	812	762	.....	762	50	94
Roxbury High.....	1,297	.....	1,154	1,154	.....	1,071	1,071	83	93
South Boston High...	883	295	507	802	277	475	752	50	94
West Roxbury High..	843	190	619	809	176	566	742	67	92
Totals, Normal, High and Latin.....	17,235	6,813	8,380	15,193	6,365	7,655	14,020	1,173	92
Totals, High and Latin.....	16,993	6,813	8,150	14,963	6,365	7,435	13,800	1,163	92

ELEMENTARY GRADES.

School Year Ending June 30, 1919.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Abraham Lincoln.....	2,140	908	976	1,884	829	889	1,718	166	91
Agassiz.....	756	606	81	687	560	70	630	57	92
Bennett.....	1,530	791	700	1,491	727	633	1,360	131	91
Bigelow.....	926	720	125	845	674	114	788	57	93
Blackinton-John Cheverus.....	1,470	693	636	1,329	624	568	1,192	137	90
Bowditch.....	1,049	242	789	1,031	216	720	936	95	91
Bowdoin.....	1,156	273	694	967	248	630	878	89	91
Bunker Hill.....	642	304	306	610	277	279	556	54	91
Chapman.....	1,290	528	559	1,087	476	503	979	108	90
Charles Sumner.....	1,062	518	471	989	473	422	895	94	91
Christopher Gibson....	1,105	511	481	992	466	435	901	91	92
Dearborn.....	1,975	959	749	1,708	866	670	1,536	172	90
Dillaway.....	1,303	238	879	1,117	206	770	976	141	87
Dudley.....	1,437	916	180	1,096	841	157	998	98	90
Dwight.....	797	573	192	765	526	162	688	77	90
Edmund P. Tileston....	964	417	377	794	380	341	721	73	91
Edward Everett.....	1,711	792	793	1,585	721	711	1,432	153	90
Elihu Greenwood.....	1,350	595	618	1,213	538	558	1,096	117	90
Eliot.....	2,764	1,777	480	2,257	1,675	436	2,111	146	93
Emerson.....	1,605	689	694	1,383	618	619	1,237	146	89
Everett.....	980	150	535	685	126	473	599	86	88
Francis Parkman.....	770	321	330	651	297	303	600	51	92
Franklin.....	1,177	278	672	950	249	615	864	86	91
Frederic W. Lincoln....	773	580	102	682	532	87	619	63	91
Gaston.....	1,048	186	777	963	172	720	892	71	93
George Putnam.....	2,256	1,006	1,031	2,037	911	925	1,836	201	90
Gilbert Stuart.....	1,003	450	431	881	397	383	780	101	90
Hancock.....	2,254	486	1,674	2,160	447	1,524	1,971	189	91
Harvard-Frothingham..	1,381	573	509	1,082	519	454	973	109	90
Henry Grew.....	762	320	306	626	280	268	548	78	88
Henry L. Pierce.....	2,062	815	854	1,669	732	758	1,490	179	89
Hugh O'Brien.....	1,497	859	517	1,376	783	464	1,247	129	91
Hyde.....	711	113	581	694	97	528	625	69	90
Jefferson.....	1,406	553	568	1,121	509	520	1,029	92	92

ELEMENTARY GRADES.

School Year Ending June 30, 1919.—Concluded.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
John A. Andrew.....	1,087	522	433	955	467	377	844	111	88
John Winthrop.....	1,737	841	771	1,612	749	688	1,437	175	89
Lawrence.....	934	635	201	836	592	186	778	58	93
Lewis.....	2,528	1,180	1,112	2,292	1,038	970	2,008	284	88
Longfellow.....	1,294	589	663	1,252	537	597	1,134	118	91
Lowell.....	1,281	533	538	1,071	492	492	984	87	92
Martin.....	1,367	374	377	751	337	336	673	78	90
Mary Hemenway.....	2,216	1,015	1,040	2,055	910	921	1,831	224	89
Mather.....	2,567	1,226	1,121	2,347	1,097	998	2,095	252	89
Minot.....	643	285	268	553	257	238	495	58	90
Norcross.....	1,098	201	750	951	185	689	874	77	92
Oliver Hazard Perry....	817	386	385	771	351	345	696	75	90
Oliver Wendell Holmes..	4,241	1,811	1,763	3,574	1,619	1,551	3,170	404	89
Phillips Brooks.....	1,569	716	752	1,468	651	682	1,333	135	91
Prescott.....	735	351	268	619	319	241	560	59	90
Prince.....	1,302	502	493	995	445	429	874	121	88
Quincy.....	1,210	769	204	973	720	184	904	69	93
Rice.....	1,006	462	341	803	418	305	723	80	90
Robert G. Shaw.....	1,429	631	682	1,313	563	608	1,171	142	89
Roger Wolcott.....	2,825	1,407	1,262	2,669	1,269	1,127	2,396	273	89
Samuel Adams.....	2,742	1,163	1,189	2,352	1,067	1,075	2,142	210	91
Sherwin.....	927	703	161	864	636	140	776	88	90
Shurtleff.....	902	171	609	780	152	556	708	72	91
Theodore Lyman.....	1,519	707	624	1,331	654	571	1,225	106	92
Thomas Gardner.....	1,477	713	649	1,362	658	592	1,250	112	92
Thomas N. Hart.....	1,036	849	182	1,031	789	165	954	77	93
Ulysses S. Grant.....	1,431	699	632	1,331	625	579	1,204	127	90
Warren.....	999	488	453	941	443	408	851	90	90
Washington.....	1,626	748	743	1,491	691	677	1,368	123	92
Washington Allston....	1,225	552	522	1,074	505	467	972	102	91
Wells.....	2,068	514	1,202	1,716	467	1,106	1,573	143	92
Wendell Phillips.....	1,294	1,258	34	1,292	1,165	29	1,194	98	92
William E. Russell.....	963	475	396	871	432	353	785	86	92
Totals.....	95,207	43,216	40,487	83,703	39,292	36,391	75,683	8,020	90

KINDERGARTENS.

School Year Ending June 30, 1919.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Abraham Lincoln.....	127	36	35	71	26	27	53	18	75
Agassiz.....	64	25	19	44	18	12	30	14	68
Bennett.....	178	78	65	143	58	50	108	35	76
Bigelow.....	51	18	26	44	15	21	36	8	82
Blackinton-John Cheverus.....	177	80	71	151	62	51	113	38	75
Bowditch.....	119	49	49	98	37	37	74	24	76
Bowdoin.....	209	80	70	150	63	56	119	31	79
Bunker Hill.....	55	19	23	42	12	17	29	13	69
Chapman.....	127	43	47	90	32	36	68	22	76
Charles Sumner.....	156	60	56	116	45	41	86	30	75
Christopher Gibson.....	67	23	32	55	16	25	41	14	75
Dearborn.....	131	60	45	105	44	34	78	27	74
Dillaway.....	133	55	52	107	40	36	76	31	71
Dudley.....	127	50	47	97	38	37	75	22	77
Dwight.....	70	20	21	41	14	14	28	13	68
Edmund P. Tileston.....	99	40	37	77	29	24	53	24	69
Edward Everett.....	112	51	52	103	42	42	84	19	82
Elihu Greenwood.....	188	71	73	144	54	52	106	38	74
Eliot.....	108	51	47	98	43	39	82	8	84
Emerson.....	141	56	65	121	40	49	89	32	74
Everett.....	70	24	30	54	17	19	36	18	67
Francis Parkman.....	71	24	29	53	21	23	44	9	83
Franklin.....	138	50	56	106	40	43	83	23	78
Frederic W. Lincoln.....	74	30	35	65	21	25	46	19	71
Gaston.....	60	25	26	51	22	22	44	7	86
George Putnam.....	224	91	95	186	69	72	141	45	76
Gilbert Stuart.....	119	41	44	85	30	32	62	23	73
Hancock.....	471	165	156	321	140	131	271	50	84
Harvard-Frothingham.....	124	49	41	90	36	29	65	25	72
Henry Grew.....	123	47	49	96	33	31	64	32	67
Henry L. Pierce.....	135	49	51	100	39	41	80	20	80
Hugh O'Brien.....	129	62	36	98	48	27	75	23	77
Hyde.....	152	53	53	106	43	41	84	22	79
Jefferson.....	165	65	55	120	48	40	88	32	73

KINDERGARTENS.

School Year Ending June 30, 1919.—Continued.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
John A. Andrew.....	46	18	16	34	15	11	26	8	76
John Winthrop.....	128	53	52	105	39	38	77	28	73
Lawrence.....	35	13	8	21	11	6	17	4	81
Lewis.....	164	79	76	155	58	54	112	43	72
Longfellow.....	76	32	36	68	25	29	54	14	79
Lowell.....	136	53	51	104	40	39	79	25	76
Martin.....	162	50	50	100	40	39	79	21	79
Mary Hemenway.....	169	61	76	137	45	55	100	37	73
Mather.....	168	65	63	128	54	53	107	21	83
Minot.....	41	14	25	39	11	19	30	9	77
Norcross.....	127	39	42	81	31	31	62	19	77
Oliver Hazard Perry....	60	21	29	50	16	22	38	12	76
Oliver Wendell Holmes..	352	158	143	301	117	103	220	81	73
Phillips Brooks.....	242	94	90	184	72	69	141	43	77
Prescott.....	35	15	10	25	10	6	16	9	64
Prince.....	44	23	16	39	17	12	29	10	74
Quincy.....	300	118	106	224	99	86	185	39	82
Rice.....	58	13	16	29	8	12	20	9	69
Robert G. Shaw.....	85	31	31	62	23	22	45	17	73
Roger Wolcott.....	313	158	139	297	121	103	224	73	76
Samuel Adams.....	395	164	174	338	127	131	258	80	76
Sherwin.....	41	13	17	30	10	13	23	7	77
Shurtleff.....	56	19	24	43	15	18	33	10	77
Theodore Lyman.....	178	74	74	148	58	59	117	31	79
Thomas Gardner.....	148	68	66	134	54	50	104	30	78
Thomas N. Hart.....	125	51	28	79	39	22	61	18	78
Ulysses S. Grant.....	176	78	67	145	60	52	112	33	77
Warren.....	114	43	41	84	33	32	65	19	77
Washington.....	168	81	74	155	67	61	128	27	83
Washington Allston....	73	26	24	50	21	19	40	10	80
Wells.....	250	102	92	194	81	74	155	39	80
William E. Russell.....	62	25	23	48	18	16	34	14	78
Totals.....	9,021	3,592	3,467	7,059	2,770	2,632	5,402	1,657	77

SPECIAL SCHOOLS.

School Year Ending June 30, 1919.

SCHOOLS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Horace Mann School....	150	72	67	139	62	58	120	19	87
Boston Clerical School...	238	.....	184	184	.....	167	167	17	91
Boston Disciplinary Day School.....	14	22	.....	22	13	.....	13	9	59
Fort Strong School.....	15	6	9	15	6	9	15	.....	100
Spectacle Island School..	7	4	3	7	4	3	7	.....	100
Boston Trade School....	297	230	.....	230	201	.....	201	29	88
Trade School for Girls...	268	.....	191	191	.....	165	165	26	86
Totals.....	989	334	454	788	286	402	688	100	87

TRADE SCHOOLS.

Total Registration by Departments, School Year Ending June 30, 1919.

BOSTON TRADE SCHOOL.

DEPARTMENT.	DAY.		Evening.
	Complete Enrollment.	Original Enrollment.	
Electrical.....	111	106	138
Machine.....	97	91	301
Printing.....	21	15	.....
Sheet metal.....	36	35	62
Woodworking.....	54	50	54
Mechanical drawing.....			168
Aeroplane construction and repair.....			24
Radio.....			137
Telegraphy.....			12
Totals.....	*319	297	896

* Including twenty-two originally enrolled during the year in other schools.

TRADE SCHOOL FOR GIRLS.

DEPARTMENT.	Day.	Extension.	Smith-Hughes.	Total.
Dressmaking.....	177	92	22	291
Millinery.....	54	41	16	111
Machine operating.....	65	95	106	266
Catering.....	15	21	18	54
Totals.....	311	249	162	722

Summer Term, 1919.

Total registration	94
Average number belonging	81
Average attendance	70
Per cent of attendance	86
Length of term — July 7 to August 29:	
Number of teachers employed, July	9
Number of teachers employed, August	10
Part time extension:	
Number enrolled	7
Hours of attendance	300

DISTRIBUTION OF PUPILS IN RESPECT BOTH

The age given is

GRADES.			4 Years and Under.	5 Years.	6 Years.	7 Years.	8 Years.	9 Years.	10 Years.
Normal School.	All Grades.....	Males..... Females.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....		.....	.....	.....	.....	.....	.....	.....
High and Latin Schools.	Post-Graduate Course....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Fourth-year Group.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Third-year Group.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Second-year Group.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	First-year Group.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Out-of-Course Group....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	V. Class Latin Schools..	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	VI. Class Latin Schools..	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	9
	Totals.....		.....	.....	.....	.....	.....	.....	9
Intermediate.	Ninth Grade.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....		.....	.....	.....	.....	.....	.....	.....
Elementary Schools.	Eighth Grade.....	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	14 5
	Seventh Grade.....	Boys..... Girls.....	.....	.....	.....	.....	.....	9 5	189 220
	Sixth Grade.....	Boys..... Girls.....	.....	.....	.....	.....	5 6	214 219	1,569 1,635
	Fifth Grade.....	Boys..... Girls.....	.....	.....	.....	1 2	96 126	1,488 1,597	1,760 1,682
	Fourth Grade.....	Boys..... Girls.....	.....	.....	.....	111 143	1,608 1,750	1,831 1,606	1,024 821
	Ungraded.....	Boys..... Girls.....	.....	.....	.....	5	29 14	56 39	48 51
	Third Grade.....	Boys..... Girls.....	.....	.....	106 132	1,757 1,811	1,889 1,805	877 725	284 239
	Second Grade.....	Boys..... Girls.....	.....	141 148	2,001 1,964	2,152 1,889	806 668	254 210	76 59
	First Grade.....	Boys..... Girls.....	112 115	3,001 2,787	2,526 2,177	971 730	247 232	52 21	11 7
	Special Classes.....	Boys..... Girls.....	.....	.....	15 9	52 23	79 53	105 72	125 61
	Pre-vocational Classes...	Boys..... Girls.....	.....	.....	.....	.....	.....	.....	.....
	Special English Classes...	Boys..... Girls.....	.....	.....	.....	.....	3 3	26 4	14 11
	Open-air Classes.....	Boys..... Girls.....	2 2	17 14	36 46	47 48	53 72	41 57	13 34
	Rapid Advancement Classes.....	Boys..... Girls.....	.....	.....	.....	.....	.....	3 1	19 16
	Conservation of Eyesight Classes.....	Boys..... Girls.....	.....	.....	.....	1 1	4 5	4 8	5 3
	Hospital Classes.....	Boys..... Girls.....	.....	1 3	.....	5 1	1 1	4 1	2 2
	Totals.....		232	6,113	9,015	9,753	9,555	9,523	9,999

TO AGE AND TO GRADE, JUNE 30, 1919.

that of September 1, 1918.

11 Years.	12 Years.	13 Years.	14 Years.	15 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 Years.	Over 21 Years.	Totals.
				1	27	47	58	48	30	14	2	227
				1	27	47	58	48	30	14	2	227
				3	7	21		1	1	3		36
				10	126	362	6	5			2	23
			4	107	503	283	143	34	8	2	2	970
			10	193	437	365	156	33	4	1	1	1,288
		5	130	584	582	212	56	9	1			1,199
	11	168	695	592	246	52	11	4				1,579
	11	175	883	722	274	68	8	1				1,780
17	231	781	700	284	70	16	3		1			2,142
6	164	880	851	377	101	13	1	1			1	2,103
												2,395
							1					1
	24	15	9		1							55
6	9	39	14	2								65
40	44	10		1								104
7	39	23	6									75
78	533	2,106	3,495	3,235	2,511	1,253	473	90	19	7	6	13,815
4	39	122	127	42	11							345
2	34	216	181	68	16							517
6	73	338	308	110	27							862
160	1,056	1,150	632	231	38	3	1					3,285
204	1,131	1,191	683	241	61	11	3					3,530
1,275	1,396	888	316	74	9	2	1					4,159
1,439	1,441	866	326	100	16	1	1					4,415
1,647	1,033	444	126	17	4							5,059
1,654	964	449	119	23	4							5,073
1,078	539	205	50	5	3		1					5,226
910	397	168	59	6	1	1						4,949
538	206	71	19	6	1		2					5,417
323	129	43	20	3								4,839
54	35	37	17	9	2		2					294
32	21	20	7	4	2							190
84	15	3			1							5,016
70	17	8										4,807
11	3		1									5,445
11	2	4										4,956
1	1											6,922
1	1											6,071
130	77	73	31	7	1							695
57	64	37	30	15	5	1						428
24	125	254	207	70	17	2	1					700
11	9	4	1									62
4	8	12	7	3								52
9	5											223
21	9	3										306
22	23	7	6	4								84
23	6	3	2	1								52
4	5	3	1	1	1							30
4	4	3	1	1								30
4	1	3		1								22
4	3		1									20
9,809	8,726	5,949	2,662	822	166	21	12					82,357

DISTRIBUTION OF PUPILS IN RESPECT BOTH

The age given is that of

	GRADES.		4 Years and Under.	5 Years.	6 Years.	7 Years.	8 Years.	9 Years.	10 Years.
Kindergarten.	All Grades.....	Boys...	2,859	1,021	137	6			
		Girls...	2,830	979	103	7			
	Totals.....		5,689	2,000	240	13			
Special Schools.	Disciplinary Day School..	Boys...					1	5	2
		Girls...							
	Horace Mann.....	Boys...	1	2	2	5	7	3	7
		Girls...	1	6	3	7	7	5	11
	Trade School for Girls.....	Girls...							
	Boston Trade School.....	Boys...							
	Boston Clerical School.....	Girls...							
	Fort Strong.....	Boys...		3	1			1	1
		Girls...		3	2	1	2		
	Spectacle Island.....	Boys...		1	1				
		Girls...		1			1		
Totals.....			2	16	9	13	18	14	21
Totals all Day Schools....			5,923	8,129	9,264	9,779	9,573	9,537	10,029

TO AGE AND TO GRADE, JUNE 30, 1919.

September 1, 1918. — Concluded.

11 Years.	12 Years.	13 Years.	14 Years.	15 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 Years.	Over 21 Years.	Totals.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,023
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,919
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,942
1	10	8	2	.....	.....	.....	.....	.....	.....	.....	.....	29
8	6	11	8	8	2	1	1	.....	.....	.....	.....	72
1	6	10	1	8	3	.....	2	.....	.....	.....	.....	71
.....	.....	10	70	55	18	13	2	6	5	3	73	245
.....	.....	.....	59	81	26	10	4	3	5	.....	18	216
.....	.....	.....	.....	1	10	41	40	33	10	2	5	142
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
11	25	39	140	153	59	65	49	42	20	5	96	797
9,904	9,357	8,432	6,605	4,321	2,790	1,386	592	180	69	26	104	106,000

CALENDAR YEAR 1918.

NORMAL, LATIN AND HIGH SCHOOLS.

Membership, Attendance and Absence.

SCHOOLS.	Average Number Belonging.	Average Attendance.	Average Absence.
Normal.....	243	233	10
High and Latin Schools:			
Public Latin.....	930	885	45
Girls' Latin.....	743	696	47
Brighton High.....	597	544	53
Charlestown High.....	445	406	39
Dorchester High.....	1,998	1,797	201
East Boston High.....	669	608	61
English High.....	1,887	1,750	137
Girls' High.....	1,788	1,594	194
High School of Commerce.....	1,243	1,194	49
High School of Practical Arts.....	478	433	45
Hyde Park High.....	673	620	53
Mechanic Arts High.....	793	742	51
Roxbury High.....	1,132	1,059	73
South Boston High.....	825	777	48
West Roxbury High.....	779	719	60
High and Latin Totals.....	14,980	13,824	1,156

CALENDAR YEAR 1918.

ELEMENTARY GRADES AND KINDERGARTEN.

Membership, Attendance and Absence.

SCHOOL DISTRICTS.	Average Number Belonging.	Average Attendance.	Average Absence.
Abraham Lincoln.....	1,937	1,756	181
Agassiz.....	702	640	62
Bennett.....	1,511	1,364	147
Bigelow.....	895	832	63
Blackinton-John Cheverus.....	1,427	1,274	153
Bowditch.....	1,072	962	110
Bowdoin.....	1,034	929	105
Bunker Hill.....	630	563	67
Chapman.....	1,131	1,005	126
Charles Sumner.....	1,060	947	113
Christopher Gibson.....	1,011	919	92
Dearborn.....	1,740	1,547	193
Dillaway.....	1,200	1,036	164
Dudley.....	1,145	1,031	114
Dwight.....	770	689	81
Edmund P. Tileston.....	819	737	82
Edward Everett.....	1,610	1,455	155
Elihu Greenwood.....	1,282	1,143	139
Eliot.....	2,307	2,143	164
Emerson.....	1,437	1,266	171
Everett.....	715	622	93
Francis Parkman.....	679	621	58
Franklin.....	1,007	908	99
Frederic W. Lincoln.....	722	649	73
Gaston.....	994	917	77
George Putnam.....	2,080	1,855	225
Gilbert Stuart.....	947	831	116
Hancock.....	2,342	2,122	220
Harvard-Frothingham.....	1,204	1,064	140
Henry Grew.....	670	564	106
Henry L. Pierce.....	1,681	1,490	191

ELEMENTARY GRADES AND KINDERGARTENS.— *Concluded.*

SCHOOL DISTRICTS.	Average Number Belonging.	Average Attendance.	Average Absence.
Hugh O'Brien.....	1,401	1,275	126
Hyde.....	746	668	78
Jefferson.....	990	898	92
John A. Andrew.....	994	882	112
John Winthrop.....	1,636	1,462	174
Lawrence.....	855	790	65
Lewis.....	2,355	2,035	320
Longfellow.....	1,286	1,155	131
Lowell.....	1,122	1,020	102
Martin.....	1,028	920	108
Mary Hemenway.....	2,086	1,837	249
Mather.....	2,390	2,117	273
Minot.....	578	517	61
Norcross.....	1,015	919	96
Oliver Hazard Perry.....	795	716	79
Oliver Wendell Holmes.....	3,694	3,255	439
Phillips Brooks.....	1,547	1,389	158
Prescott.....	658	592	66
Prince.....	967	840	127
Quincy.....	1,093	998	95
Rice.....	821	721	100
Robert G. Shaw.....	1,293	1,151	142
Roger Wolcott.....	2,756	2,452	341
Samuel Adams.....	2,510	2,255	255
Sherwin.....	878	785	93
Shurtleff.....	795	731	64
Theodore Lyman.....	1,422	1,294	128
Thomas Gardner.....	1,428	1,293	135
Thomas N. Hart.....	1,071	983	88
Ulysses S. Grant.....	1,344	1,199	145
Warren.....	974	896	78
Washington.....	1,592	1,449	143
Washington Allston.....	1,058	949	109
Wells.....	1,817	1,652	165
Wendell Phillips.....	1,290	1,191	99
William E. Russell.....	920	821	99
Totals for Elementary Schools.....	86,966	77,988	9,015

CALENDAR YEAR 1918.

SPECIAL SCHOOLS.

SPECIAL SCHOOLS.	Average Number Belonging.	Average Attendance.	Average Absence.
Horace Mann School.....	137	119	18
Boston Clerical School.....	189	169	20
Boston Disciplinary Day School.....	14	9	5
Boston Trade School.....	196	173	23
Trade School for Girls.....	209	182	27
Totals.....	745	652	93

NUMBER OF PUPILS PER TEACHER.

JANUARY 31.	Normal. (Excluding Head Master.)	High and Latin. (Excluding Head Masters.)	ELEMENTARY.	
			Grades. (Excluding Principals.)	Kindergartens.
1897.....	26.1	28.4	51.5	28.6
1898.....	26.9	28.2	49.5	30.9
1899.....	26.1	28.0	51.4	29.0
1900.....	23.1	27.9	52.7	29.4
1901.....	18.9	27.5	49.8	28.6
1902.....	18.7	25.8	48.9	28.6
1903.....	18.8	26.4	48.0	28.5
1904.....	19.3	26.5	48.3	27.1
1905.....	19.9	27.3	48.4	28.5
1906.....	20.3	27.4	48.2	28.1
1907.....	17.0	26.9	47.9	26.8
1908.....	16.4	26.9	47.1	27.4
1909.....	14.0	29.2	45.6	25.7
1910.....	15.6	27.5	43.6	25.6
1910-11.....	16.0	28.9	42.2	23.4
1911-12.....	16.1	28.8	40.3	25.9
1912-13.....	14.0	27.8	42.7	25.4
1913-14.....	13.4	29.4	43.4	25.6
1914-15.....	15.4	31.2	42.9	27.4
1915-16.....	19.0	30.8	42.4	27.5
1916-17.....	19.6	30.3	41.4	23.9
1917-18.....	16.3	28.1	40.9	25.5
1918-19*.....	15.3	26.7	40.1	25.4

* The average number of teachers was: Normal, 15; Latin and high, 561; elementary grades, 2,058; kindergartens, 278.

GRADUATES, JUNE, 1919.

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.
Normal.....		73	73	Dearborn.....	† 64	58	122
HIGH AND LATIN.				Dillaway.....		106	106
Public Latin.....	94		94	Dudley.....	‡ 71		71
Girls' Latin.....		93	93	Dwight.....	37		37
Brighton High.....	28	78	106	Edmund P. Tileston..	27	35	62
Charlestown High....	7	29	36	Edward Everett.....	64	83	147
Dorchester High.....	86	240	326	Elihu Greenwood.....	40	59	99
East Boston High....	36	75	111	Eliot.....	§ 66		66
English High.....	312		312	Everett.....		54	54
Girls' High.....		264	264	Francis Parkman.....	25	35	60
High School of Com- merce.....	183		183	Franklin.....		36	36
High School of Prac- tical Arts.....		80	80	Frederic W. Lincoln..	46		46
Hyde Park High.....	31	49	80	Gaston.....		85	85
Mechanic Arts High..	100		100	Gilbert Stuart.....	39	41	80
Roxbury High.....		165	165	Harvard-Frothing- ham.....	54	53	107
South Boston High...	33	98	131	Henry Grew.....	23	26	49
West Roxbury High..	33	89	122	Hugh O'Brien.....	88	55	143
	943	1,333	2,276	Hyde.....		66	66
ELEMENTARY.				Jefferson.....	49	63	112
Agassiz.....	* 80		80	John A. Andrew.....	27	26	53
Bennett.....	64	52	116	Lawrence.....	|| 53		53
Bigelow.....	84		84	Longfellow.....	58	85	143
Blackinton-John Chev- erus.....	35	45	80	Lowell.....	52	56	108
Bowditch.....		74	74	Martin.....	33	30	63
Bowdoin.....		79	79	Mather.....	¶ 74	109	183
Bunker Hill.....	21	28	49	Minot.....	29	20	49
Chapman.....	27	39	66	Norcross.....		74	74
Charles Sumner.....	56	47	103	Oliver Hazard Perry..	35	50	85
Christopher Gibson...	59	70	129	Phillips Brooks.....	46	86	132
				Prescott.....	** 19	39	58
				Prince.....	33	36	69

* Also 28 given Pre-vocational diplomas.

† Also 23 given Pre-vocational diplomas.

‡ Also 42 given Pre-vocational diplomas.

§ Also 9 given Pre-vocational diplomas.

|| Also 16 given Pre-vocational diplomas.

¶ Also 51 given Pre-vocational diplomas.

** Also 11 given Pre-vocational diplomas.

GRADUATES, JUNE, 1919.— *Concluded.*

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.
Quincy.....	* 44	.....	44	Washington Allston...	60	60	120
Rice.....	47	35	82	Wells.....	.....	108	108
Roger Wolcott.....	84	100	184	Wendell Phillips.....	173	.....	173
Samuel Adams.....	56	52	108	William E. Russell....	51	50	101
Sherwin.....	† 48	.....	48	SUMMARY.	2,350	2,518	4,868
Shurtleff.....	.....	55	55		.....	73	73
Theodore Lyman.....	‡ 22	19	41		.....	.....	.....
Thomas Gardner.....	29	40	69		943	1,333	2,276
Thomas N. Hart.....	75	.....	75		2,350	2,518	4,868
Warren.....	42	47	89		3,293	3,924	§ 7,217
Washington.....	41	52	93				

* Also 27 given Pre-vocational diplomas.

† Also 29 given Pre-vocational diplomas.

‡ Also 17 given Pre-vocational diplomas.

§ In addition 253 were given Pre-vocational diplomas in June, and 128 were given regular diplomas in September after satisfactorily completing the work of the Summer Review Schools. (See page 26.) The net total number of graduates in 1919 was 7,345.

INTERMEDIATE SCHOOLS.

Pupils Promoted to Ninth Grade, Intermediate Classes.

SCHOOL OR DISTRICT.	Boys.	Girls.	Total
Abraham Lincoln.....	52	74	126
Emerson.....	51	42	93
George Putnam.....	73	93	166
Hancock.....	.....	65	65
Henry L. Pierce.....	58	75	133
John Winthrop.....	46	50	96
Lewis.....	83	99	182
Mary Hemenway.....	83	90	173
Oliver Wendell Holmes.....	125	160	285
Robert G. Shaw.....	44	59	103
Ulysses S. Grant.....	58	51	109
Totals.....	673	858	* 1,531

* In addition, 50 pupils were promoted to the ninth grade, intermediate classes, in September after satisfactorily completing the work of the Summer Review Schools. (See page 27.) The net number of pupils promoted to ninth grade, intermediate classes, was 1,581.

SUMMER REVIEW SCHOOLS.

Graduates, September, 1919.

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.
Summer Review High School:				Mather.....		1	1
Dorchester High....	1	.....	1	Roger Wolcott.....	17	6	23
English High.....	14	.....	14	East Boston Summer Review Elementary School:			
Girls' High.....		1	1	Blackinton-John Cheverus.....	2	.....	2
High School of Commerce.....	4	.....	4	Chapman.....		5	5
Hyde Park High.....		1	1	Samuel Adams.....	2	.....	2
Roxbury High.....		4	4	Theodore Lyman.....		1	1
South Boston High....		1	1	Hyde Park Summer Review Elementary School:			
	19	7	26	Edmund P. Tileston,	1	2	3
SUMMER REVIEW ELEMENTARY SCHOOLS:				Elihu Greenwood....	5	1	6
Bigelow Summer Review Elementary School:				Lewis Summer Review Elementary School:			
Frederic W. Lincoln	10	.....	10	Bowditch.....		1	1
John A. Andrew.....		2	2	Dearborn.....	1	.....	1
Lawrence.....	1	.....	1	Lillaway.....		1	1
Norcross.....		2	2	Longfellow.....		1	1
William E. Russell....		1	1	Phillips Brooks.....	4	3	7
City Summer Review Elementary School:				Sherwin.....	1	.....	1
Bowditch.....		2	2	West End Summer Review Elementary School:			
Dwight.....	6	.....	6	Eliot.....	2	.....	2
Franklin.....		3	3	Washington.....		1	1
Hyde.....		1	1	Wendell Phillips.....	5	.....	5
Martin.....		2	2				
Quincy.....	1	.....	1	SUMMARY.			
Rice.....	3	.....	3	High.....	17	8	25
Thomas Gardner....	1	.....	1	Elementary.....	63	40	103
Dorchester Summer Review Elementary School:					80	48	128
Edmund P. Tileston..	1	.....	1				
Gilbert Stuart.....		4	4				

INTERMEDIATE SCHOOLS.

Pupils Promoted to Ninth Grade, Intermediate Classes, from Summer Review Schools.

	Boys.	Girls.	Total.
Emerson.....	9	3	12
George Putnam.....	2	4	6
Henry L. Pierce.....	2	5	7
John Winthrop.....	3		3
Lewis.....	3		3
Oliver Wendell Holmes.....	10	9	19
Totals.....	29	21	50

ELEMENTARY SCHOOL PUPILS PROMOTED.

June 30, 1919.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advancement Class.	Pre-Vocational Class.	Kindergarten.	Total.
Abraham Lincoln.....	69	121	203	194	220	230	152	168	190	10	.....	5	20	.....	.....	68	1,650
Agassiz.....	80	68	84	88	95	59	54	61	.....	.....	3	.....	.....	53	43	688
Bennett.....	117	145	180	170	170	180	186	225	.....	.....	15	.....	.....	.....	146	1,534
Bigelow.....	60	90	68	98	83	69	88	81	.....	.....	4	.....	52	.....	45	738
Blackinton-John Cheverus.....	81	138	134	176	155	151	163	181	.....	.....	5	.....	.....	.....	133	1,297
Bowditch.....	74	89	108	88	108	137	138	153	.....	.....	.....	34	.....	.....	91	1,020
Bowdoin.....	79	88	92	54	73	128	145	174	.....	.....	20	32	.....	.....	154	1,039
Bunker Hill.....	49	53	49	63	65	76	53	67	.....	.....	1	.....	.....	.....	38	514
Chapman.....	68	86	131	120	111	119	133	133	.....	.....	.....	.....	.....	.....	91	992
Charles Sumner.....	103	129	137	140	130	77	97	129	.....	.....	.....	.....	.....	.....	136	1,078
Christopher Gibson.....	129	120	125	135	162	66	73	90	.....	.....	.....	.....	.....	.....	45	945
Dearborn.....	122	121	134	154	200	216	198	250	19	.....	1	.....	.....	56	102	1,573
Dillaway.....	105	86	129	91	93	115	125	128	.....	.....	4	.....	*12	.....	101	989
Dudley.....	71	74	87	98	124	130	88	127	.....	.....	3	.....	.....	86	73	961
Dwight.....	37	47	88	81	72	48	51	70	25	.....	.....	19	.....	.....	51	589

[illegible]

* Conservation of eyesight classes.

† Hospital classes.

Roger Wolcott.....	189	226	305	288	284	312	342	361	.....	.....	3	.....	.....	.....	282	2,592
Samuel Adams.....	109	163	225	252	285	266	321	348	.....	.....	5	.....	.....	.....	249	2,223
Sherwin.....	48	34	72	82	85	123	57	107	.....	.....	.....	.....	66	.....	22	696
Shurtleff.....	55	71	62	74	73	119	82	105	.....	.....	.....	.....	.....	.....	37	704
Theodore Lyman.....	42	102	123	134	179	178	164	176	.....	.....	9	.....	.....	86	120	1,313
Thomas Gardner.....	69	90	166	124	140	172	190	234	.....	.....	.....	.....	.....	.....	128	1,313
Thomas N. Hart.....	75	86	86	98	99	146	155	136	.....	.....	.....	.....	.....	.....	63	944
Ulysses S. Grant.....	62	108	118	123	133	162	194	199	.....	.....	17	.....	.....	.....	148	1,417
Warren.....	90	79	110	94	108	88	135	116	.....	.....	.....	.....	.....	.....	70	890
Washington.....	97	90	128	163	149	136	156	214	.....	.....	9	53	.....	.....	155	1,350
Washington Allston.....	120	115	149	133	128	96	92	114	.....	.....	.....	.....	.....	.....	53	1,000
Wells.....	108	98	156	152	141	227	239	288	.....	.....	20	65	*9	.....	170	1,573
Wendell Phillips.....	173	189	213	225	220	31	25	18	.....	.....	13	.....	.....	.....	.....	1,125
William E. Russell.....	100	72	102	82	91	81	87	105	.....	.....	1	.....	.....	.....	44	765
Totals.....	830	6,341	7,412	8,937	8,899	9,090	9,091	10,643	354	86	329	440	229	648	6,511	79,293

* Conservation of eyesight classes.

ELEMENTARY SCHOOL PUPILS NOT PROMOTED.

June 30, 1919.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advancement Class.	Pre-Vocational Class.	Kindergarten.	Total.
Abraham Lincoln.....	28	19	17	24	20	18	17	32	47	.....	13	18	.....	.....	13	266
Agassiz.....	4	12	3	17	15	6	1	10	.....	.....	15	.....	.....	4	16	103
Bennett.....	1	7	15	14	9	11	13	25	.....	.....	.....	.....	.....	.....	12	107
Bigelow.....	16	17	25	24	2	4	28	.....	.....	25	.....	.....	.....	8	149
Blackinton-John Cheverus.....	5	15	24	14	26	14	3	56	.....	.....	11	.....	.....	.....	44	212
Bowditch.....	10	11	10	12	24	9	6	21	.....	.....	.....	1	.....	.....	28	132
Bowdoin.....	1	7	1	8	16	36	.....	.....	12	3	.....	.....	21	105
Bunker Hill.....	10	19	23	14	4	10	37	.....	.....	29	.....	.....	.....	16	162
Chapman.....	12	35	31	14	22	11	18	32	.....	.....	.....	.....	.....	.....	28	203
Charles Sumner.....	3	12	9	4	6	5	5	6	.....	.....	.....	.....	.....	.....	8	58
Christopher Gibson.....	10	5	4	6	13	15	12	16	.....	.....	.....	.....	.....	.....	6	87
Dearborn.....	5	27	32	36	25	9	26	60	23	.....	13	.....	.....	1	18	275
Dillaway.....	5	46	35	38	17	10	10	47	.....	.....	11	.....	*2	.....	20	241
Dudley.....	4	22	28	27	25	14	12	28	.....	.....	12	.....	.....	16	30	218
Dwight.....	13	37	33	8	13	3	2	17	7	.....	96	4	.....	.....	4	237

Edmund P. Tilton.....	8	13	12	18	16	9	6	19	.....	13	.....	40	144
Edward Everett.....	.....	10	17	29	7	13	26	40	.....	8	.....	9	159
Elihu Greenwood.....	7	43	16	20	18	9	12	31	.....	.....	.....	42	198
Eliot.....	14	29	31	81	105	35	66	98	16	8	30	6	541
Emerson.....	3	7	14	19	16	18	15	67	.....	.....	.....	18	177
Everett.....	6	5	10	10	.....	1	6	54	.....	1	.....	8	101
Francis Parkman.....	2	2	9	4	2	2	7	19	.....	.....	.....	8	55
Franklin.....	7	9	5	14	11	9	17	20	.....	13	.....	18	123
Frederic W. Lincoln.....	15	20	21	25	22	12	3	15	1	.....	.....	19	153
Gaston.....	.....	24	20	12	12	5	8	26	.....	.....	.....	.....	107
George Putnam.....	9	20	24	11	11	10	17	29	.....	18	.....	33	182
Gilbert Stuart.....	13	33	14	23	8	12	8	20	.....	.....	.....	22	153
Hancock.....	.....	4	23	60	76	19	33	91	7	20	29	13	54
Harvard-Frothingham.....	.....	4	8	9	12	10	16	36	.....	18	.....	28	142
Henry Grew.....	2	5	6	2	7	8	7	23	.....	.....	.....	22	82
Henry L. Pierce.....	24	18	34	29	17	16	15	23	57	.....	.....	15	263
Hugh O'Brien.....	9	20	12	23	13	6	4	61	.....	15	.....	22	184
Hyde.....	8	14	12	16	15	.....	11	17	.....	14	.....	41	148
Jefferson.....	4	17	25	27	11	20	16	41	.....	11	.....	34	206
John A. Andrew.....	2	63	46	43	23	13	14	24	6	.....	.....	7	241
John Winthrop.....	10	31	43	4	12	27	13	51	.....	11	.....	10	212
Lawrence.....	1	5	2	4	8	8	17	34	.....	.....	4	9	92

**** Conservation of eyesight classes.**

† Hospital classes.

ELEMENTARY SCHOOL PUPILS NOT PROMOTED.

June 30, 1919.—Concluded.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advancement Class.	Pre-Vocational Class.	Kindergarten.	Total.
Lewis.....	5	4	3	6	3	4	5	17	18	.....	.....	.....	.....	.....	.....	9	74
Longfellow.....	3	9	6	14	4	9	3	19	.....	.....	.....	.....	.....	.....	.....	67
Lowell.....	1	6	7	7	7	13	11	42	.....	.....	30	1	.....	.....	18	143
Martin.....	6	7	18	29	16	6	12	12	.....	.....	.....	.....	.....	.....	33	139
Mary Hemenway.....	3	5	12	32	36	27	27	26	54	.....	.....	.....	.....	.....	.....	21	243
Mather.....	5	26	42	20	30	10	19	52	.....	.....	11	.....	.....	23	33	271
Minot.....	6	10	5	3	.....	2	1	3	.....	.....	.....	.....	.....	.....	.....	30
Norcross.....	2	10	16	18	21	3	10	25	8	.....	.....	10	.....	.....	29	152
Oliver Hazard Perry.....	8	22	27	30	24	4	2	25	1	.....	14	.....	.....	.....	18	175
Oliver Wendell Holmes.....	27	19	25	24	23	26	30	54	.....	.....	.....	.....	.....	.....	49	277
Phillips Brooks.....	17	10	15	15	5	1	10	4	.....	.....	5	.....	.....	.....	34	116
Prescott.....	7	1	13	12	9	12	13	24	.....	.....	16	.....	.....	13	5	125
Prince.....	11	32	28	.....	14	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	95
Quincy.....	2	7	19	7	14	8	10	22	11	.....	16	26	.....	9	56	207
Rice.....	3	6	20	22	15	.....	8	19	8	.....	.....	.....	.....	.....	8	109

[illegible]

*Conservation of eyesight classes.

SUMMER REVIEW ELEMENTARY SCHOOL PUPILS PROMOTED.

September, 1919.

SUMMER REVIEW SCHOOL.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Totals.
Bigelow.....		17	81	65	66	86	315
Shurtleff Branch.....			18	34	21	18	91
Charlestown.....			42	52	44	93	231
City.....		17	81	76	79	94	347
Dorchester.....		59	111	117	111	90	488
East Boston.....	3	22	61	71	42	62	261
Hugh O'Brien.....		37	153	149	94	73	506
Hyde Park.....		11	57	49	47	29	193
Lewis.....			44	64	83	72	263
West End.....		8	44	88	122	133	395
Totals.....	3	171	692	765	709	750	3,090

SUMMER REVIEW ELEMENTARY SCHOOL PUPILS NOT PROMOTED.

September, 1919.

SUMMER REVIEW SCHOOL.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Totals.
Bigelow.....		13	9	27	7	56
Shurtleff Branch.....		2	3	8	5	18
Charlestown.....		30	35	44	30	139
City.....	3	12	36	28	29	108
Dorchester.....	4	40	37	43	23	147
East Boston.....	3	32	4	36	53	128
Hugh O'Brien.....		11	14	29	17	71
Hyde Park.....	1	18	22	13	10	64
Lewis.....	4	13	17	11	20	65
West End.....		11	10	30	37	88
Totals.....	15	182	187	269	231	884

ADMISSIONS TO NORMAL, LATIN AND HIGH SCHOOLS.

September, 1918.

SCHOOLS TO WHICH PUPILS WERE ADMITTED.	Boys.	Girls.	Total.	Boston High School Graduates, June, 1918.	Received from Other Sources, September, 1918.	AVERAGE AGE OF HIGH 1918 GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Normal.....	.....	.....	95	85	10	17	6	17	9
SCHOOLS TO WHICH PUPILS WERE ADMITTED.									
	Boys.	Girls.	Total.	Boston Elementary Graduates, June, 1918.	Received from Other Sources, September, 1918.	AVERAGE AGE OF BOSTON ELEMENTARY GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Public Latin.....	368	.....	368	145	* 223	13	6	13	3
Girls' Latin.....	.....	262	262	111	† 151	13	9	12	5
Brighton High.....	67	143	210	182	28	14	1	14	2
Charlestown High.....	104	162	266	188	78	14	1	14	2
Dorchester High.....	230	326	556	499	57	14	1	14	2
East Boston High.....	108	138	246	194	52	13	11	14	2
English High.....	625	.....	625	558	67	14	1	14	2
Girls' High.....	.....	748	748	591	157	14	2	14	3
High School of Commerce.....	500	.....	500	396	104	14	3	14	2
High School of Practical Arts.....	.....	161	161	133	28	14	6	14	7
Hyde Park High.....	125	166	291	196	95	14	7	14	7
Mechanic Arts High.....	466	.....	466	359	107	14	3	14	4
Roxbury High.....	.....	373	373	285	88	14	1	14	2
South Boston High.....	135	190	325	279	46	13	11	13	11
West Roxbury High.....	72	233	305	213	92	13	11	14	4
Totals, High and Latin.....	2,800	2,902	5,702	4,329	1,373	14	1	14	1

* Includes 121 pupils below eighth grade.

† Includes 73 pupils below eighth grade.

ADMISSIONS TO NINTH GRADE INTERMEDIATE CLASSES.
September, 1918.

SCHOOLS TO WHICH PUPILS WERE ADMITTED.	Boys.	Girls.	Total.	Boston Elementary Graduates, June, 1918.	Received from Other Sources, September, 1918.	AVERAGE AGE OF BOSTON ELEMENTARY GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Abraham Lincoln.....	34	62	96	94	2	14	4	14	4
Emerson.....	42	41	83	83	.....	14	2	14	2
George Putnam.....	63	65	128	126	2	13	7	13	7
Hancock.....	.....	46	46	46	.....	14	6	14	6
Henry L. Pierce.....	50	53	103	103	.....	13	9	13	9
John Winthrop.....	28	35	63	61	2	14	2	14	2
Lewis.....	69	106	175	170	5	13	5	13	5
Mary Hemenway.....	55	88	143	138	5	13	7	13	8
Robert G. Shaw.....	40	46	86	85	1	13	9	13	9
Ulysses S. Grant.....	25	40	65	65	.....	13	10	13	10
Totals.....	406	582	988	971	17	13	10	13	10

TEACHERS.

SUMMARY OF ALL TEACHERS — JUNE 30, 1919.

Number of Schools.

SCHOOLS.	Number of Schools.	NUMBER OF TEACHERS.		
		Men.	Women.	Total.
Normal.....	1	4	12	16
High and Latin.....	15	278	284	562
Elementary.....	* 67	151	1,989	2,140
Kindergarten.....	† 154	.....	288	288
Special.....	‡ 7	103	304	407
Totals.....	244	536	2,877	3,413

* Represents the number of districts.

† Includes thirteen afternoon classes, as follows: Blackinton-John Cheverus (1); Eliot (1); Hancock (2); Phillips Brooks (1); Quincy (2); Roger Wolcott (1); Samuel Adams (3); Theodore Lyman (1); Ulysses S. Grant (1).

‡ Horace Mann, Trade School for Girls, Boston Trade School, Continuation School, Boston Clerical School, Boston Disciplinary Day School, and the Day School for Immigrants. The number of teachers given includes the teachers of the special schools and all general supervisors and directors.

NORMAL SCHOOL TEACHERS.

June 30, 1919.

RANK.	Men.	Women.	Total.
Head Master.....	1	.....	1
Masters, Heads of Departments.....	* 3	.....	3
First Assistants, Heads of Departments.....	.....	6	6
Assistants.....	.....	5	5
Instructor.....	.....	1	1
Totals.....	4	12	16

* Excludes one master, head of department, who is assigned principal of the Model School.

SUMMARY OF HIGH AND LATIN SCHOOL TEACHERS.

June 30, 1919.

RANK.	Men.	Women.	Total.
Head Masters	14	.....	14
Masters, Heads of Departments	51	.....	51
First Assistants, Heads of Departments .....	.....	31	31
Assistant Principals .....	.....	2	2
Masters	26	.....	26
Junior Masters	145	.....	145
Assistants	1	179	180
Industrial Instructor, Head of Department .....	.....	1	1
Instructors in Special Branches	24	11	35
Assistant Instructors in Special Branches .....	.....	32	32
Coördinators	2	.....	2
Coöperative Instructors	3	.....	3
Industrial Instructors .....	.....	12	12
Junior Assistants	9	4	13
Temporarily assigned for the school year	3	12	15
Totals	278	284	562

HIGH AND LATIN SCHOOLS.

Number and Rank of Teachers June 30, 1919.

SCHOOLS.	Head Masters.	Masters, Heads of Departments.	First Assistants, Heads of Departments.	Assistant Principals.	Masters.	Junior Masters.	Assistants.	Industrial Instructor, Head of Department.	Instructors in Special Branches.	Assistant Instructors in Special Branches.	Coördinators.	Coöperative Instructors.	Industrial Instructors.	Junior Assistants.	Temporarily Assigned for the School Year.	Total.
Public Latin.....	1	6	.....	.....	6	16	.....	.....	.....	.....	.....	.....	.....	2	.....	31
Girls' Latin.....	1	2	3	.....	.....	2	15	.....	1	1	.....	.....	.....	.....	2	27
Brighton High.....	1	2	.....	1	1	.....	9	.....	1	2	.....	1	.....	.....	2	20
Charlestown High.....	1	2	1	.....	.....	2	6	.....	1	1	1	.....	.....	.....	3	18
Dorchester High.....	1	3	4	.....	4	9	35	.....	2	6	.....	1	3	1	1	70
East Boston High.....	1	2	4	.....	.....	3	11	.....	3	.....	.....	.....	.....	.....	1	25
English High.....	1	7	.....	.....	9	44	.....	.....	.....	.....	.....	.....	.....	3	.....	64
Girls' High.....	1	3	4	.....	.....	6	38	.....	1	6	.....	.....	.....	.....	1	60
High School of Commerce....	1	7	.....	.....	2	29	.....	.....	5	.....	.....	.....	.....	1	2	47
High School of Practical Arts,	1	2	3	.....	1	*10	1	1	1	.....	.....	.....	7	.....	1	27
Hyde Park High.....	1	2	1	.....	.....	2	8	.....	3	2	1	1	2	2	1	26
Mechanic Arts High.....	1	6	.....	1	3	24	.....	.....	11	.....	.....	.....	.....	.....	.....	46
Roxbury High.....	1	2	4	.....	.....	1	18	.....	2	7	.....	.....	.....	3	1	39
South Boston High.....	.....	2	3	.....	1	3	15	.....	1	5	.....	.....	.....	1	.....	31
West Roxbury High.....	1	3	4	.....	.....	3	15	.....	3	2	.....	.....	.....	.....	.....	31
Totals.....	14	51	31	2	26	145	180	1	35	32	2	3	12	13	15	562

* Excludes one assistant assigned to High School of Commerce.

SUMMARY OF ELEMENTARY SCHOOL TEACHERS.

June 30, 1919.

RANK.	Men.	Women.	Total.
Masters.....	60	6	66
Submasters.....	83		83
Masters' Assistants.....		71	71
First Assistants, Grammar Schools.....		25	25
First Assistant, Primary School.....		1	1
First Assistants in Charge.....		100	100
Prevocational Assistants.....		23	23
Instructors, Special Classes.....		65	65
Other Assistants.....		1,697	1,697
Junior Assistants assigned from High Schools.....	8	1	9
Grand Totals.....	151	1,989	2,140
Kindergartens:			
First Assistants.....		150	150
Assistants.....		138	138
Totals.....	151	2,277	2,428

ELEMENTARY SCHOOLS.
Number and Rank of Teachers June 30, 1919.

SCHOOLS.	Masters.	Submasters.	Masters' Assistants.	First Assistants, Grammar Schools.	First Assistants, Primary Schools.	First Assistants in Charge.	Pre-Vocational Assistants.	Instructors, Special Classes.	Other Assistants.	Junior Assistants, Assigned from High Schools.	Total Number of Grade Teachers, June 30, 1919.	KINDER- GARTENS.	
												First Assistants.	Assistants.
Abraham Lincoln.....	1	2	2	1	.....	1	.....	1	37	.....	45	2	1
Agassiz.....	1	1	1	.....	.....	1	* 2	1	12	.....	19	1	1
Bennett.....	1	1	1	.....	.....	2	.....	1	29	.....	35	3	3
Bigelow.....	1	2	1	.....	.....	1	.....	2	18	.....	25	1	1
Blackinton-John Cheverus.....	1	2	2	.....	.....	1	.....	1	27	1	35	4	2
Bowditch.....	1	.....	1	1	.....	2	.....	.....	21	.....	26	2	2
Bowdoin.....	1	.....	1	1	.....	1	.....	2	19	.....	25	3	3
Bunker Hill.....	1	1	1	.....	.....	1	.....	2	12	.....	18	2	.....
Chapman.....	1	1	1	.....	.....	1	.....	.....	22	.....	26	2	2
Charles Sumner.....	1	2	1	1	.....	1	.....	.....	20	.....	26	3	1
Christopher Gibson.....	1	1	1	.....	.....	1	.....	.....	21	.....	25	1	1
Dearborn.....	1	2	1	1	.....	2	2	1	35	.....	45	2	2
Dillaway.....	1	.....	1	.....	.....	3	.....	1	23	.....	29	2	2
Dudley.....	1	2	1	.....	.....	2	3	1	17	.....	27	2	2

* Includes one assistant assigned from Ulysses S. Grant District.

ELEMENTARY SCHOOLS.

Number and Rank of Teachers June 30, 1919. — Continued.

SCHOOLS.	Masters.	Submasters.	Masters' Assistants.	First Assistants, Grammar Schools.	First Assistants, Primary Schools.	First Assistants in Charge.	Pre-Vocational Assistants.	Instructors, Special Classes.	Other Assistants.	Junior Assistants, Assigned from High Schools.	Total Number of Grade Teachers, June 30, 1919.	KINDER- GARTENS.	
												First Assistants.	Assistants.
Dwight.....	1	1	1	1	1	1	.....	*4	†13	.....	21	1	1
Edmund P. Tleston.....	1	1	1	.....	.....	.....	.....	.....	19	.....	22	2	1
Edward Everett.....	1	1	1	.....	.....	2	.....	1	34	1	41	2	2
Elihu Greenwood.....	1	2	1	.....	.....	1	.....	.....	25	.....	30	3	3
Eliot.....	1	3	1	.....	.....	3	1	2	48	.....	59	2	2
Emerson.....	1	1	1	.....	.....	2	.....	.....	28	1	34	2	3
Everett.....	1	.....	1	.....	.....	1	.....	1	14	.....	18	1	1
Francis Parkman.....	1	1	1	.....	.....	.....	.....	.....	14	.....	17	1	1
Franklin.....	1	.....	1	.....	.....	2	.....	1	20	.....	25	2	2
Frederic W. Lincoln.....	†1	2	1	.....	.....	1	.....	.....	14	.....	19	1	2
Gaston.....	1	.....	1	1	.....	1	.....	.....	20	1	25	1	1
George Putnam.....	1	2	1	.....	.....	2	.....	2	45	.....	53	4	3
Gilbert Stuart.....	1	1	1	.....	.....	2	.....	.....	18	.....	23	2	1
Hancock.....	1	.....	1	1	.....	2	.....	3	48	.....	56	7	7
Harvard-Frothingham.....	1	2	2	2	.....	2	.....	1	21	.....	31	3	1

Henry Grew.....	1	1	1	1	1	1	1	1	13	16	2	2
Henry L. Pierce.....	1	2	1	1	1	2	2	1	34	42	2	2
Hugh O'Brien.....	1	2	1	1	1	1	1	1	26	33	2	2
Hyde.....	1	1	1	1	1	2	2	1	14	19	2	3
Jefferson.....	1	1	2	1	1	1	1	1	24	31	3	2
John A. Andrew.....	1	1	1	1	1	1	1	1	21	25	1	1
John Windthrop.....	1	1	1	1	1	3	3	1	31	40	2	2
Lawrence.....	1	1	1	1	1	2	2	1	14	22	1	.....
Lewis.....	1	2	1	1	1	2	2	1	50	59	2	4
Longfellow.....	1	1	1	1	1	.....	.....	1	27	32	2	1
Lowell.....	1	1	1	1	1	2	2	1	21	27	2	2
Martin.....	1	1	1	1	1	2	2	.....	13	18	2	2
Mary Hemenway.....	1	2	1	1	1	2	2	.....	44	51	3	3
Mather.....	1	2	1	1	1	2	2	§ 4	46	58	3	3
Minot.....	1	1	1	1	1	1	1	.....	11	14	1	.....
Norcross.....	1	1	1	1	1	2	2	.....	20	25	2	2
Oliver Hazard Perry.....	†	.....	1	1	1	1	1	1	14	19	1	1
Oliver Wendell Holmes.....	1	3	1	1	1	3	3	2	77	88	5	6
Phillips Brooks.....	1	2	1	1	1	1	1	1	30	36	4	4
Prescott.....	1	1	1	1	1	1	1	2	11	18	1	.....
Prince.....	1	1	1	1	1	1	1	.....	20	24	1	1
Quincy.....	1	3	1	1	1	1	1	2	19	29	4	6

* Includes one assistant assigned from Roger Wolcott District.

† Includes one first assistant in charge, special classes.

‡ The master of the Frederic W. Lincoln District also serves as master of the Oliver Hazard Perry District.

§ Includes one assistant instructor in manual training assigned from Department of Manual Arts.

ELEMENTARY SCHOOLS.

Number and Rank of Teachers, June 30, 1919.—Concluded.

SCHOOLS.	Masters.	Submasters.	Masters' Assistants.	First Assistants, Grammar Schools.	First Assistants, Primary Schools.	First Assistants in Charge.	Pre-Vocational Assistants.	Instructors, Special Classes.	Other Assistants.	Junior Assistants, Assigned from High Schools.	Total Number of Grade Teachers, June 30, 1919.	KINDER-GARTENS.	
												First Assistants.	Assistants.
Rice.....	1	1	1	1	1	1	1	1	16	1	21	1	1
Robert Gould Shaw.....	1	1	1	1	1	2	2	1	25	1	31	1	2
Roger Wolcott.....	1	2	1	1	1	4	4	1	55	1	64	5	7
Samuel Adams.....	1	1	1	1	1	2	2	1	43	1	50	6	6
Sherwin.....	1	2	1	1	1	2	2	7	*14	1	29	1	1
Shurtleff.....	1	1	1	1	1	1	1	1	16	1	19	1	1
Theodore Lyman.....	1	1	1	1	1	1	3	1	25	1	34	3	3
Thomas Gardner.....	1	2	1	1	1	1	1	1	28	1	32	3	2
Thomas N. Hart.....	1	2	1	1	1	2	2	1	19	1	27	2	2
Ulysses S. Grant.....	1	1	1	1	1	1	1	1	28	1	34	3	3
Warren.....	1	1	1	1	1	1	1	1	20	1	24	2	1
Washington.....	1	2	1	1	1	2	2	1	31	1	38	3	3
Washington Allston.....	1	1	1	1	1	1	1	1	23	1	27	1	1
Wells.....	1	1	1	1	1	3	3	3	34	1	43	5	3
Wendell Phillips.....	1	3	1	1	1	1	1	4	*27	1	37	1	1
William E. Russell.....	1	1	1	1	1	1	1	1	19	1	24	1	1
Totals.....	66	83	71	25	1	100	23	65	1,697	9	2,140	150	138

* Includes one first assistant in charge, special classes.

SPECIAL TEACHERS, SUPERVISORS AND DIRECTORS.

June 30, 1919.

	Men.	Women.	Total.
Boston Clerical School:*			
Head Instructor in Bookkeeping.....	1		1
Head Instructor in Stenography.....	1		1
Clerical Instructor.....	1		1
Clerical Assistants.....		5	5
Horace Mann School:			
Principal.....		1	1
Assistant Principal.....		1	1
Assistants.....		13	13
Day Industrial Schools:			
Trade School for Girls:			
Master.....		1	1
Heads of Departments.....		7	7
Instructor in Personal and Shop Hygiene.....		1	1
Vocational Assistants.....		4	4
Trade Assistants.....		14	14
Helpers.....		9	9
Boston Trade School:			
Master.....	1		1
Vice Principal.....	1		1
Instructors in Academic and Technical Branches.....	2		2
Instructor.....	1		1
Division Heads.....	4		4
Shop Foremen.....	6		6
Shop Instructors.....	2		2
Tool Keepers.....	3		3
Household Science and Arts:			
Director.....		1	1
Assistant Director.....		1	1
Cooking.....		43	†43
Sewing.....		63	‡63
Department of Manual Arts:			
Director.....	1		1
First Assistant Director.....	1		1
Assistant Directors.....	2		2
First Assistant.....		1	1
Assistants.....		8	8
Foremen Shopwork.....	2	1	3
Shop Foremen.....	6		§6
Instructors Shopwork.....	10	1	||11
Shop Instructors.....	13		13
Instructors in Manual Training.....		11	11
Assistant Instructors in Manual Training.....		40	¶40
Music Department:			
Director.....	1		1
Assistant Directors.....	3		3
Assistants.....		9	9
Practice and Training:			
First Assistant Director.....		1	1
Assistant Directors.....		4	4
Director of Evening Schools.....	1		1

* The head master of the Roxbury High School served also as head master of the Boston Clerical School. He is counted in the number of high and Latin school teachers.

† Includes two temporary teachers in place of teachers assigned to high schools.

‡ Includes one temporary teacher in place of one teacher assigned to Continuation School.

§ Includes two assigned to high schools.

|| Includes one assigned to a high school.

¶ Includes one assigned to an elementary school.

SPECIAL TEACHERS, SUPERVISORS AND DIRECTORS.

June 30, 1919.—Concluded.

	Men.	Women.	Total.
Continuation School:*			
Principal.....	1		1
Heads of Division.....	2	1	3
Division Foremen.....	4		4
Shop Foremen.....	2		2
Shop Instructor.....	1		1
Instructors, Boys' Classes.....	8		8
Vocational Assistant.....		1	1
Trade Assistants.....		5	5
Assistants.....	9	27	36
Helper.....		1	1
Aids.....		2	2
Tool Keepers.....	5		5
Assigned Sewing Teacher.....		1	1
Assistant Director of Educational Investigation and Measurement.....	1		1
Elementary Assistant Assigned to Department of Educational Investigation and Measurement.....		1	1
Director of Kindergartens.....		1	1
Assistant Director of Kindergartens.....		1	1
Director of Special Classes.....		1	1
Director of Salesmanship.....		1	1
Boston Disciplinary Day School.....		2	†2
Day School for Immigrants.....		2	†2
Speech Improvement Classes:			
Instructor in Charge.....		1	1
Instructors.....		7	7
Conservation of Eyesight Classes.....		5	§5
Director of Penmanship.....		1	1
Teacher of Penmanship.....		1	1
Director of Medical Inspection.....	1		1
Physical Training:			
Director of Athletics.....	1		1
Instructor in Physical Training.....	1		1
Military Drill:			
Instructor.....	1		1
Assistant Instructors.....	2		2
Vocational Guidance:			
Director.....		1	1
Vocational Assistants.....	1	1	2
Totals.....	103	304	407

* In addition there were thirteen special assistants on part time.

† Includes one temporary teacher and one assistant, elementary schools, assigned from June 2, 1919.

‡ In addition there were fourteen special assistants on part time.

§ Includes two temporary teachers and one assistant, elementary schools, assigned for school year.

MISCELLANEOUS SUPERVISORS.

Nurses (including supervising nurse)	46
School Physicians	45
Attendance Officers (including chief attendance officer)	24
Supervisor of Licensed Minors	1
Medical Inspector of Special Classes	1
Director of Extended Use of Public Schools	1

NUMBER OF TEACHERS.

January 31, 1919.

1.	Normal School		*17
2.	Latin and High Schools		†575
3.	Elementary Schools:		
	Principals	66	
	Grade Teachers	†2,069	
			2,135
4.	Kindergartens		\$270
5.	Boston Clerical School		8
6.	Horace Mann School		15
7.	Special Teachers:		
	Director and Assistant Director of Household Science and Arts		2
	Cooking		‡42
	Sewing		¶62
	Department of Manual Arts		**102
	Music Department		13
	First Assistant Director and Assistant Directors of Practice and Training		5
	Director of Evening Schools		1
	Assistant Director of Educational Investigation and Measurement		1
	Director and Assistant Director of Kindergartens		2
	Director of Special Classes		1
	Director of Salesmanship		1
	Department of Vocational Guidance		3
	Speech Improvement Classes		6
	Classes for Conservation of Eyesight		††5
	Director of Penmanship		1
	Teacher of Penmanship		1
	Director of Medical Inspection		1
	Director of Athletics		1
	Instructor in Physical Training		1
	Instructor and Assistant Instructor in Military Drill		††5
8.	Day Industrial Schools:		
	Boston Trade School	17	
	Trade School for Girls	36	
			53
9.	Continuation School		63
10.	Boston Disciplinary Day School		§§1
11.	Day School for Immigrants . . . . .		|||5

* Excludes one master, head of department, assigned acting principal of Model School.

† Includes seven assistants and one assistant, kindergarten, assigned from elementary schools, five teachers assigned from Department of Household Science and Arts, and two shop foremen and one instructor, shop work, assigned from Department of Manual Arts.

‡ Includes one temporary teacher in place of an assistant assigned to the Department of Educational Investigation and Measurement, four temporary teachers in place of assistants assigned to high schools, and two assistants assigned to Speech Improvement Classes.

¶ Includes a temporary teacher in place of an assistant assigned to a high school.

** Includes three teachers assigned to high schools.

†† Includes one teacher assigned to a high school and one teacher assigned to Continuation School.

‡‡ Includes one co-operative instructor assigned from a high school, three temporary teachers; two shop foremen and one instructor, shop work, assigned to high schools.

§§ Includes two temporary teachers, and one assistant assigned from an elementary school.

||| Includes three temporary instructors.

§§§ Temporary teacher.

||| Includes two special assistants.

EVENING SCHOOLS.

Summary of Statistics — School Year 1918-19.

	Number of Schools.	Number of Regular Teachers.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
			Males.	Females.	Total.				
High Schools.....	9	119	1,582	2,539	4,121	2,517	2,046	471	81
Elementary Schools...	12	99	1,432	1,811	3,243	1,542	1,286	256	83
Boston Trade School,*	1	25	884	12	896	324	245	79	76
Totals.....	22	243	3,898	4,362	8,260	4,383	3,577	806	82

* Includes four branches.

EVENING SCHOOLS.

School Year 1918-19.— Continued.

HIGH SCHOOLS.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.	Number of Nights.
	Males.	Females.	Total.					
Brighton.....	70	140	210	133	107	26	80	62
Central.....	418	124	542	325	277	48	85	62
Charlestown.....	132	166	298	209	163	46	78	61
Dorchester.....	306	508	814	464	367	97	79	62
East Boston.....	121	201	322	200	172	28	86	62
Girls'.....		573	573	330	273	57	83	62
Hyde Park.....	43	106	149	83	64	19	77	62
Roxbury.....	289	488	777	473	377	96	80	62
South Boston.....	203	233	436	300	246	54	82	62
Totals.....	1,582	2,539	4,121	2,517	2,046	471	81	62

EVENING SCHOOLS.

School Year 1918-19.—Concluded.

ELEMENTARY SCHOOLS.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.	Number of Nights.
	Males.	Females.	Total.					
Abraham Lincoln.....	114	57	171	75	69	6	92	83
Bigelow.....	141	208	349	161	136	25	84	83
Brighton.....	46	142	188	77	60	17	78	83
Comins.....	77	129	206	90	73	17	81	83
Dearborn.....	42	163	205	79	70	9	89	83
Eliot.....	235	66	301	153	131	22	86	83
Franklin.....	243	346	589	267	226	41	85	83
Hyde Park.....	52	61	113	57	44	13	77	83
Phillips Brooks.....	133	231	364	177	133	44	75	83
Theodore Lyman.....	137	124	261	133	109	24	82	83
Washington.....	158	113	271	150	131	19	87	83
Wendell Phillips.....	54	171	225	123	104	19	85	83
Totals.....	1,432	1,811	3,243	1,542	1,286	256	83	83
TRADE SCHOOLS (Evening Classes).								
Boston Trade School.....	459	4	463	153	106	47	69	62
Central Branch.....	236	2	238	97	79	18	81	62
Common Street Branch.....	70	2	72	26	22	4	85	62
East Boston Branch.....	30		30	19	17	2	89	62
North End Branch.....	89	4	93	29	21	8	72	62
Totals.....	884	12	896	324	245	79	76	62

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1919.

High Schools.

SUBJECTS.	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Commercial Subjects *	93	49	211	188	396	418	320	451	150	369	78	230	39	153	36	303	85	210	37	63	1,445	2,434
Other Subjects † . . . . .	.....	.....	7	1	12	2	29	4	18	4	17	11	11	12	5	6	27	50	11	15	137	105
Totals	93	49	218	189	408	420	349	455	168	373	95	241	50	165	41	309	112	260	48	78	1,582	2,539
Total number of pupils of each age	142	407	828	804	541	336	215	350	372	126												

* Including all subjects offered in Evening Commercial High Schools.

† Those subjects not offered in Evening Commercial High Schools.
(Ages as of September 1, 1918.)

Elementary Schools.

GRADES.	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Graduating.....	53	52	79	71	92	52	22	22	21	17	11	7	11	6	25	27	20	17	9	7	343	278
Subgraduating.....	26	20	15	16	21	13	17	10	7	4	10	5	4	6	30	28	46	28	17	16	193	146
Elementary.....			1		3	2	3	1	8		5	2	12	3	17	12	12	25	3	15	64	60
Advanced.....			1	1	15	10	21	9	26	12	27	16	25	14	72	32	83	15	30	8	300	117
Intermediate.....					8	11	8	15	16	20	24	22	22	18	59	26	59	22	27	22	223	156
Beginners.....				1	11	7	7	8	6	5	19	9	23	9	69	26	62	32	41	28	238	125
Ungraded.....			2		2				1	4	2	2	2	1	13	11	24	6	9	18	55	42
Lip Reading.....															4	8	3	29	8	29	15	66
Cooking.....							2	2		2		1	1			9		13		10		39
Dressmaking.....							8	8		15		7	18			56		55		33		196
Embroidery.....							4	4		4		3		5		15		31		7		71
Home Nursing.....								1						2		18		76		42		139
Millinery.....							3	3		3		11		20		128		109		101		376
Totals.....	79	72	98	89	152	103	78	83	85	86	98	85	99	103	289	396	309	458	144	336	1,431	1,811
Total number of pupils of each age..	151		187		255		161		171		183		202		685		767		480			3,242

(Ages as of September 1, 1918.)

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1919.—Continued.

Trade Schools.

SUBJECTS.	15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Shopwork.....			70		45		38		19		17		44	1	88	1	39	1	360	2	362
Drawing.....	5		49		49		30		22		12		47	1	72	1	28		314	2	316
Theory.....			46		24	2	20	2	18		32		39	4	26		5		210	8	218
Totals.....	5		165		118	2	88	2	59		61		130	6	186	2	72		884	12	896
Total number of pupils of each age.....	5		165		120		90		59		61		136		188		72				

(Ages as of September 1, 1918.)

Grand Total.

SCHOOLS.	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
High Schools.....	93	49	218	189	408	420	349	455	168	373	95	241	50	165	41	309	112	260	48	78	1,582	2,539
Elementary Schools.....	79	72	98	89	152	103	78	83	85	86	98	85	99	103	289	396	309	458	144	336	1,431	1,811
Trade Schools.....			5		165		118	2	88	2	59		61		130	6	186	2	72		884	12
Totals.....	172	121	321	278	725	523	545	540	341	461	252	326	210	268	460	711	607	720	264	414	3,897	4,362
Total number of pupils of each age.....	293		599		1,248		1,085		802		578		478		1,171		1,327		678			

(Ages as of September 1, 1918.)

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1919.—*Concluded.*
*Non-English Speaking Pupils.**

	16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		21 YEARS AND OVER.		TOTALS FOR EACH GROUP.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Illiterates between 16 and 21 years of age.....	23	21	39	35	41	34	51	34	52	37	519	238	206	161
Illiterates over 21 years of age.....											757		519	238
Total number of pupils of each age.....	44		74		75	85			89				725	399
														1,124

* Also reported under "Grades," Elementary Schools, page 53.
 (Ages as of September 1, 1918.)

Countries of Birth of Pupils in Evening Schools.

COUNTRIES OF BIRTH.	High Schools.	Elementary Schools.	Trade Schools.
Austria-Hungary*	14	37	1
Belgium.....	3	5	.....
British Possessions†	303	276	82
China.....	.....	5	.....
Denmark.....	2	2	.....
France.....	9	5	3
Germany‡	5	15	5
Greece.....	5	118	.....
Italy.....	54	555	86
Japan.....	.....	1	6
Mexico.....	.....	1	1
Netherlands.....	5	7	4
Norway.....	6	9	3
Portugal.....	1	36	.....
Roumania.....	5	2	3
Russia§	350	652	129
Spain.....	3	29	1
Sweden.....	12	24	8
Switzerland.....	1	1	.....
Turkey||	16	95	10
United States.....	3,325	1,263	550
African Countries.....	.....	7	1
South American Countries.....	1	11	1
Other North American Countries.....	.....	73	1
Other European Countries.....	.....	8	.....
Other Asiatic Countries.....	1	5	1
Totals.....	4,121	3,242	896

* Includes Austrians, Bohemians, Galicians and Hungarians.

† Includes Australians, Canadians, English, Irish, Newfoundlanders, Scotch and Welsh.

‡ Includes Germans, Hebrews and Poles.

§ Includes Finns, Hebrews, Lithuanians and Poles.

|| Includes Albanians, Armenians, Syrians and Turks.

DAY SCHOOLS FOR IMMIGRANTS.

School Year 1918-19.

Number of Regular Teachers.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
	Males.	Females.	Total.				
2*	275	662	937.	359	298	61	83

* Not including special assistants.

CONTINUATION SCHOOL.

School Year 1918-19.

CLASSES.	Number of Regular Teachers.*	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
		Males.	Females.	Total.				
Compulsory Classes.....	61	5,445	4,206	9,651	6,047	5,817	230	96.2
Voluntary Classes.....	1	11	.....	11	10	9	1	90.0

* Not including per diem teachers equivalent to 6.4 full time regular teachers.

SUMMER REVIEW SCHOOLS.

1919.

NAME OF SCHOOL.	Total Registration.	Average Membership.	Average Attendance.	Percentage of Attendance.	Average Daily Number of Teachers.
High.....	400	379	357	94.3	18.0
Elementary:					
Bigelow (including Shurtleff Branch).....	480	451	436	97.0	16.
Charlestown.....	370	320	310	96.8	10.0
City.....	479	443	423	95.5	14.0
Dorchester.....	633	600	591	96.9	20.0
East Boston.....	390	363	352	96.7	13.0
Hugh O'Brien.....	334	311	295	94.8	10.4
Hyde Park.....	257	236	231	97.8	8.0
Lewis.....	571	547	511	94.0	17.0
West End.....	483	457	446	98.0	15.6
Totals:					
Elementary.....	3,997	3,728	3,595	93.2	123.4
High.....	400	379	357	94.3	18.0
Totals, High and Elementary.....	4,397	4,107	3,952	96.4	141.4

NOTE.— For other Summer Review School statistics, see pages 26, 27, and 36.

PLAYGROUNDS.

Number of Teachers School Year 1918-19.

SEASONS.	First Assistants.	Assistants.	Sand Garden Assistants.	Supervisors.	Play Teachers.	Totals.
1918.						
Fall (September 4 to December 6):						
Men.....				4	38	42
Women.....	44	16	31	4	8	103
Totals.....	44	16	31	8	46	145
1919.						
Spring (April 1 to June 28):						
Men.....				4	53	57
Women.....	25	31	7	4	9	76
Totals.....	25	31	7	8	62	133
Summer (June 30 to July 31):						
Men.....				1		1
Women.....	74	44	30	4		152
Totals.....	74	44	30	5		153
Summer (August 1 to September 6):						
Men.....				1		1
Women.....	74	32	42	3		151
Totals.....	74	32	42	4		152

SCHOOLHOUSE SUMMARY.

School Year Ending June 30, 1919.

GRADE OF SCHOOL.	Number of Buildings.	Number of Portables. (Wood.)	Assembly Halls.	Drill Halls and Gymnasias.	CONSTRUCTION OF SCHOOLHOUSES.	
					Wood.	Brick.
Normal.....	1	.....	1	1	.....	1
High and Latin..	18	4	16	14	.....	18
Elementary.....	* 236	132	76	.....	48	188
Boston Trade School.....	1	.....	1	.....	.....	1
Trade School for Girls.....	3	.....	1	.....	.....	3
Horace Mann School.....	1	.....	2	.....	.....	1
Totals.....	260	136	97	15	48	212

* Two (Patrick A. Collins and Sarah J. Baker buildings) are used exclusively for high school.

NOTE.—In addition to the above there were in use during the school year the following rented quarters: High schools, 3; elementary schools, 12; and the Continuation School, La Grange street, with branches at 52 Tileston street and 278 Tremont street. A class was also conducted at Fort Strong and one at Spectacle Island.

SCHOOLROOMS AND SITTINGS.

SCHOOLS.	Day Rooms.	Evening Rooms.	Day School Sitzings.
Normal.....	22	.....	228
High and Latin (including all rooms in which instruction of any character is given).....	561	95	19,604
Elementary.....	2,483	79	109,939
Horace Mann School.....	15	.....	198
Industrial Schools.....	46	25	700
Totals.....	3,127	199	130,669

CLASS ROOMS IN NORMAL, DAY HIGH AND LATIN SCHOOLS.

(Including Laboratories and all Other Rooms in which Instruction of any Character is Given.)

SCHOOLS.	Rooms.	Gymnasias and Drill Halls.
Normal.....	22	* G.
Public Latin School.....	31	† D. H. and G.
Girls' Latin School.....	25	* G.
Brighton High School.....	29	D. H. and G.
Charlestown High School.....	23	G.
Dorchester High School.....	61	G.
East Boston High School.....	29	G.
English High School.....	‡ 61	† D. H. and G.
Girls' High School.....	53	G.
High School of Commerce.....	53	G.
High School of Practical Arts.....	30	G.
Hyde Park High School.....	29	D. H.
Mechanic Arts High School.....	37	.....
Roxbury High School.....	§ 45	D. H.
South Boston High School.....	29	G.
West Roxbury High School.....	26	G.
Total.....	583	

* Used jointly.

† Used jointly.

‡ Including Patrick A. Collins Schoolhouse and Franklin Union.

§ Including Sarah J. Baker Annex and Boston Clerical School.

CLASS ROOMS IN DAY ELEMENTARY DISTRICTS.
(Including Regular Schoolhouses, Portables, Hired Quarters and
Improved Rooms in Halls, Corridors and Basements.)

June 30, 1919.

DISTRICT.	Class Rooms.	DISTRICT.	Class Rooms.
Abraham Lincoln.....	53	John A. Andrew.....	28
Agassiz.....	23	John Winthrop.....	48
Bennett.....	44	Lawrence.....	33
Bigelow.....	33	Lewis.....	59
Blackinton-John Cheverus.....	42	Longfellow.....	32
Bowditch.....	30	Lowell.....	31
Bowdoin.....	26	Martin.....	35
Bunker Hill.....	28	Mary Hemenway.....	55
Chapman.....	29	Mather.....	62
Charles Sumner.....	33	Minot.....	15
Christopher Gibson.....	22	Norcross.....	35
Dearborn.....	49	Oliver Hazard Perry.....	22
Dillaway.....	34	Oliver Wendell Holmes.....	100
Dudley.....	44	Phillips Brooks.....	39
Dwight.....	28	Prescott.....	23
Edmund P. Tileston.....	23	Prince.....	23
Edward Everett.....	41	Quincy.....	40
Elihu Greenwood.....	37	Rice.....	28
Eliot.....	57	Robert G. Shaw.....	37
Emerson.....	37	Roger Wolcott.....	68
Everett.....	24	Samuel Adams.....	60
Francis Parkman.....	18	Sherwin.....	30
Franklin.....	34	Shurtleff.....	22
Frederic W. Lincoln.....	20	Theodore Lyman.....	38
Gaston.....	26	Thomas Gardner.....	35
George Putnam.....	54	Thomas N. Hart.....	29
Gilbert Stuart.....	31	Ulysses S. Grant.....	37
Hancock.....	60	Warren.....	31
Harvard-Frothingham.....	27	Washington.....	46
Henry Grew.....	21	Washington Allston.....	33
Henry L. Pierce.....	42	Wells.....	60
Hugh O'Brien.....	34	Wendell Phillips.....	43
Hyde.....	24	William E. Russell.....	32
Jefferson.....	46	Total.....	2,483

SEATING CAPACITY.

NORMAL, LATIN AND DAY HIGH SCHOOLS.

(Seats Available for "Home" Seating.)

June 30, 1919.

SCHOOLS.	Regular Seats.	Hall Seats.	Portable Seats.	In Rented Quarters.	In Base- ments.	In Portable Buildings.	Totals.
Normal School.....	228						228
Public Latin School.....	1,083		395				1,478
Girls' Latin School.....	923		39				962
Brighton High School.....	665		42				707
Charlestown High School.....	450		270				720
Dorchester High School.....	1,585	96	477		24	84	2,266
East Boston High School.....	655		148	38			841
English High School.....	1,695	70	274	400	42		* 2,481
Girls' High School.....	2,217						2,217
High School of Commerce.....	1,794						1,794
High School of Practical Arts.....	415		464				879
Hyde Park High School.....	616			†			616
Mechanic Arts High School.....	941		28				969
Roxbury High School.....	1,546		81		40		‡ 1,667
South Boston High School.....	865		145				1,010
West Roxbury High School.....	847	60				90	997
Totals.....	16,525	226	2,363	438	106	174	19,832

* Including Patrick A. Collins Schoolhouse and Franklin Union.

† Y. M. C. A. Gymnasium.

‡ Including Sarah J. Baker Annex and Boston Clerical School.

SEATING CAPACITY OF DAY ELEMENTARY SCHOOLS.

June 30, 1919.

[illegible]

SEATING CAPACITY OF DAY ELEMENTARY SCHOOLS.

June 30, 1919.—Continued.

DISTRICT.	REGULAR SEATS.				PORTABLE SEATS IN REGULAR ROOMS.				HALL CLASSES.				BASEMENT.				PORTABLE BUILDINGS.				RENTED QUARTERS.				TOTAL NUMBER OF EXTRA SEATS.				TOTAL NUMBER OF SEATS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.		Grades.	Kinder- garten.	Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
69	Dudley.....	1,641	105	1,746	20	20

[illegible]

SEATING CAPACITY OF DAY ELEMENTARY SCHOOLS.

June 30, 1919. — Concluded.

DISTRICT.	REGULAR SEATS.			PORTABLE SEATS IN REGULAR ROOMS.			HALL CLASSES.			BASEMENT.			PORTABLE BUILDINGS.			RENTED QUARTERS.			TOTAL NUMBER OF EXTRA SEATS.			TOTAL NUMBER OF SEATS.		
	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.
Rice.....	931	41	972	7	7	14	7	7	14	7	7	14	7	7	14	7	7	14	7	7	14	938	41	979
Robert G. Shaw.....	1,383	.....	1,383	16	92	108	.....	.....	.....	.....	.....	.....	133	.....	133	.....	.....	.....	149	92	241	1,532	92	1,624
Roger Wolcott.....	2,042	192	2,234	109	80	189	80	209	70	279	476	.....	476	.....	476	93	.....	.....	967	70	1,037	3,009	262	3,271
Samuel Adams.....	2,133	142	2,275	31	.....	31	.....	.....	.....	.....	401	.....	401	.....	401	.....	.....	.....	432	.....	432	2,565	142	2,707
Shaw.....	790	.....	790	116	50	166	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	116	50	166	906	50	956
Shurtleff.....	844	51	895	.....	.....	.....	.....	.....	.....	.....	48	.....	48	.....	48	.....	.....	.....	48	.....	48	892	51	943
Theodore Lyman.....	1,173	168	1,341	14	24	38	24	.....	.....	.....	202	.....	202	.....	202	.....	.....	.....	240	.....	240	1,413	168	1,581
Thomas Gardner.....	1,398	143	1,541	.....	.....	.....	.....	.....	.....	.....	228	.....	228	.....	228	.....	.....	.....	228	.....	228	1,626	143	1,769
Thomas N. Hart.....	1,246	106	1,352	4	.....	4	.....	.....	.....	.....	66	.....	66	.....	66	.....	.....	.....	70	.....	70	1,316	106	1,422
Ulysses S. Grant.....	1,511	100	1,611	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	12	1,523	100	1,623
Warren.....	1,135	100	1,235	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	6	1,141	100	1,241
Washington.....	1,791	210	2,001	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	10	1,801	210	2,011
Washington-Allston.....	974	521	1,495	38	.....	38	.....	.....	.....	.....	177	.....	177	.....	177	.....	.....	.....	215	.....	215	1,189	52	1,241
Wells.....	2,262	235	2,497	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,262	235	2,497
Wendell Phillips.....	1,750	.....	1,750	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,750	.....	1,750
William E. Russell.....	1,397	53	1,450	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,398	53	1,451
Totals.....	94,175	6,245	100,420	1,078	977	2,055	299	24	323	563	70	633	5,073	191	5,264	955	289	1,244	7,968	1,495	9,463	102,143	7,796	109,939

EXTENDED USE OF THE PUBLIC SCHOOLS, 1918-19.

SCHOOL CENTERS.

	Total Attendance.	Number of Sessions.	Average Attendance.
School Center Activities.....	324,282	1,173	276
Use of School Buildings (through June 30, 1919),	52,377	379	138
Total.....	376,659	.....	.....

WORKERS EMPLOYED.

TITLE.	Blackstone School Center.	Charlestown High School Center.	Dorchester High School Center.	East Boston High School Center.	Elliot School Center.	Roxbury School Center.	Sherwin School Center.	South Boston High School Center.	Washington School Center.
Managers *	1	1	1	1	1	1	1	1	1
Assistant Managers †		1	1	1		1			
Special Leaders	3	6	5	4	2	7	2	6	1
Leaders	2		4	6	2	3	1		3
Pianists	1	1	2	1	1	3	1	1	
Helpers	1	1	6	5		13	1	4	
Totals.	8	10	19	18	6	27	5	12	4

* Director served without pay as manager of the Roxbury School Center. Special leaders managed activities at the Sherwin and Washington School Centers.
 † Each assistant manager served in one center only. Five centers had no assistant manager.

Numbers varied somewhat from month to month. The above figures taken from the April, 1919, payroll. This table does not include volunteer workers.

SCHOOL CENTER ACTIVITIES.

ACTIVITIES.	BLACKSTONE SCHOOL CENTER.			CHARLESTOWN HIGH SCHOOL CENTER.			DORCHESTER HIGH SCHOOL CENTER.			EAST BOSTON HIGH SCHOOL CENTER.			ELIOT SCHOOL CENTER.			ROXBURY PRACTICAL ARTS HIGH SCHOOL CENTER.			SHERWIN SCHOOL CENTER.			SOUTH BOSTON HIGH SCHOOL CENTER.			WASHINGTON SCHOOL CENTER.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.			
Alumni Clubs.....	.....	.....	.....	.....	.....	.....	30	1	30	.....	.....	.....	97	8	12	525	13	40	.....	.....	.....	.....	.....	.....
Bands, Brass (Men).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	843	36	23	4	1	4	.....	.....	.....	.....	.....	.....
Concerts, Lectures and Entertainments.....	11,200	22	509	3,142	14	224	6,595	14	471	7,173	17	422	2,200	11	200	24,120	58	416	6,155	21	293	910	3	303	2,325	6	389
Choral Clubs (Young Men)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Choral Club (Young Men and Young Women)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Civic Clubs.....	270	19	13	.....	.....	.....	.....	.....	.....	743	23	32	2,227	27	82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Committee Meetings.....	30	2	15	50	2	25	50	4	13	208	10	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conferences.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooking Clubs (Young Women).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	2	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dancing Clubs (Young Men and Young Women).....	207	12	17	.....	.....	.....	2,899	31	94	1,984	26	76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Debating Clubs (Young Men).....	58	5	12	.....	.....	.....	.....	.....	.....	295	23	13	43	4	11	130	17	8	.....	.....	.....	.....	.....	.....	.....	.....

SCHOOL CENTER ACTIVITIES.— *Concluded.*

ACTIVITIES.	BLACKSTONE SCHOOL CENTER.			CHARLESTOWN HIGH SCHOOL CENTER.			DORCHESTER HIGH SCHOOL CENTER.			EAST BOSTON HIGH SCHOOL CENTER.			ELIOT SCHOOL CENTER.			ROXBURY PRACTICAL ARTS HIGH SCHOOL CENTER.			SHERWIN SCHOOL CENTER.			SOUTH BOSTON HIGH SCHOOL CENTER.			WASHINGTON SCHOOL CENTER.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.			
Dramatic Clubs (Young Women).....	121	8	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dressmaking Clubs.....	.....	.....	.....	.....	.....	.....	83	9	9	.....	.....	.....	.....	.....	.....	259	30	9	.....	.....	.....	587	29	20
Embroidery Clubs.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gymnasium Games (Young Men).....	136	9	15	1,340	21	64	1,363	13	105	671	16	42	.....	.....	.....	1,376	19	72	.....	.....	.....	2,202	27	85
Gymnasium Games (Young Women).....	551	23	24	950	20	48	.....	.....	.....	618	16	39	.....	.....	.....	732	26	28	.....	.....	.....	2,449	24	102
Legions, American.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Millinery Clubs.....	.....	.....	.....	.....	.....	.....	155	19	8	521	26	20	66	22	33	122	18	7	.....	.....	.....	.....	.....	.....
Mothers' Clubs.....	228	15	19	1,306	22	59	.....	.....	.....	.....	.....	.....	150	15	10	.....	.....	.....	136	13	10	.....	.....	.....
Motion Pictures.....	.....	.....	.....	8,715	30	291	10,135	19	533	13,494	29	465	.....	.....	.....	13,910	27	515	975	4	244	11,085	28	396
Orchestra Clubs (Adults Mixed).....	.....	.....	.....	.....	.....	.....	399	25	16	427	25	17	.....	.....	.....	2,028	67	30	.....	.....	.....	.....	.....	.....
Parliamentary Law Club,.....	.....	.....	.....	.....	.....	.....	348	24	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Patriotic Meetings, War Drives, etc.....	13,145	28	409	2,537	15	169	13,965	24	582	6,703	15	447	4,545	15	303	7,425	17	437	300	1	300	1,450	3	483			
													</														

[illegible]

AFTERNOON ACTIVITIES.

ACTIVITIES.	BLACKSTONE SCHOOL CENTER.			CHARLESTOWN HIGH SCHOOL CENTER.			DORCHESTER HIGH SCHOOL CENTER.			EAST BOSTON HIGH SCHOOL CENTER.			ELIOT SCHOOL CENTER.			ROXBURY PRACTICAL ARTS HIGH SCHOOL CENTER.			SHERWIN SCHOOL CENTER.			SOUTH BOSTON HIGH SCHOOL CENTER.			WASHINGTON SCHOOL CENTER.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.			
Children's Games Clubs.....			
Committee Meetings.....	155	8	19	44	3	15	395	14	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooking Demonstrations.....	25	1	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Current Events Club.....	130	5	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dancing Clubs (Boys and Girls).....	65	5	13	2,709	18	151	2,676	18	149	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Entertainments.....	275	1	275	572	2	288	600	1	600	245	1	245	.....	.....	.....	.....	.....	.....
Girl Scouts.....	142	6	24	273	17	16	.....	.....	.....	.....	.....	.....	832	26	32	.....	.....	.....	.....	.....	.....
Handel Hebrew School.....	3,051	109	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Millinery Clubs.....	142	14	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mothers' Clubs.....	768	13	59	458	9	51	1,749	25	70	874	16	55	.....	.....	.....	1,699	22	77	.....	.....	.....	730	16	46
Motion Pictures.....	400	1	400	3,436	9	382	6,915	17	407	8,930	17	525	2,250	4	563	3,000	4	750	750	3	250
Pageants.....	350	1	350		
Patriotic Meetings.....	999	3	333	500	1	500	1,645	2	823		
Red Cross Clubs.....	42	4	11	
Rehearsals.....	145	1	145	295	4	74	293	6	49	170	6	28	
Socials and Dances.....	200	1	200	
Whist.....	261	8	33	81	4	20	
Totals.....	1,168	9,087	13,183	15,557	600	5,500	3,730	750	

THE FOLLOWING TABLE IS A RECORD OF THE NUMBER OF CERTIFICATES ISSUED TO WORKING CHILDREN AND YOUNG PEOPLE FOR TWO YEARS UNDER THE ACTS OF 1913, CHAPTER 779.

MONTH.	EMPLOYMENT CERTIFICATES.				EDUCATIONAL CERTIFICATES.							
	1917-18.		1918-19.		EVENING SCHOOL ATTENDANCE NOT REQUIRED.				EVENING SCHOOL ATTENDANCE COMPULSORY.			
	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	1917-18.		1918-19.		1917-18.		1918-19.	
					New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.
September.....	874	1,814	708	1,743	1,022	2,499	910	2,524	19	100	13	53
October.....	707	1,282	609	1,069	1,000	2,544	1,098	2,647	74	107	13	52
November.....	403	951	539	1,129	857	2,194	789	2,021	44	65	17	45
December.....	282	667	350	892	833	1,775	800	2,059	26	53	13	47
January.....	276	677	352	1,049	698	2,033	748	2,110	23	56	19	47
February.....	463	593	265	759	669	1,712	590	1,551	18	41	11	31
March.....	499	955	281	793	849	2,269	638	1,644	32	64	10	26
April.....	433	958	238	607	703	2,289	579	1,351	18	58	5	11
May.....	537	1,074	297	703	839	2,308	577	1,747	11	65	3	14
June.....	1,577	966	1,261	791	1,333	2,472	1,079	1,801	15	59	13	28
July.....	2,112	1,028	1,326	811	1,592	2,649	1,261	2,177	21	67	10	25
August.....	596	959	555	794	896	2,380	733	1,762	23	61	7	16
Totals.....	8,759	11,924	6,781	11,140	11,291	27,124	9,802	23,394	324	796	134	395

REGISTRATION OF MINORS.

April 1, 1919.

GROUP.	ENROLLMENT OF PUPILS.					
	5 to 7 years.		7 to 14 years.		14 to 16 years	
	Males.	Females.	Males.	Females.	Males.	Females.
Boston public schools.....	8,301	7,702	34,963	32,105	9,855	9,604
Private schools.....	155	114	698	771	225	253
Business schools.....					15	117
Parochial schools.....	2,095	2,726	8,054	9,705	998	1,564
Schools outside of Boston....	19	9	245	99	238	51
Charitable institutions.....	14	9	51	24	10	7
Institutions for educational and custodial purposes.....	91	76	185	329	21	110
Physically or mentally de- fective children not en- rolled in any school.....			20	41	3	2
Employment certificates.....					4,557	3,803
Special home permits.....					3	255
Grand totals.....	10,675	10,636	44,216	43,074	15,925	15,766
Educational certificates of illiterates.....					125	59

SCHOOL DOCUMENT NO. 17—1919
BOSTON PUBLIC SCHOOLS

ANNUAL REPORT OF THE SUPERINTENDENT

NOVEMBER, 1919



BOSTON
PRINTING DEPARTMENT
1919

Boston, November 1, 1919.

To the School Committee:

I submit herewith the thirty-seventh annual report of the Superintendent of Public Schools.

Respectfully submitted,

FRANK V. THOMPSON,
Superintendent of Public Schools.

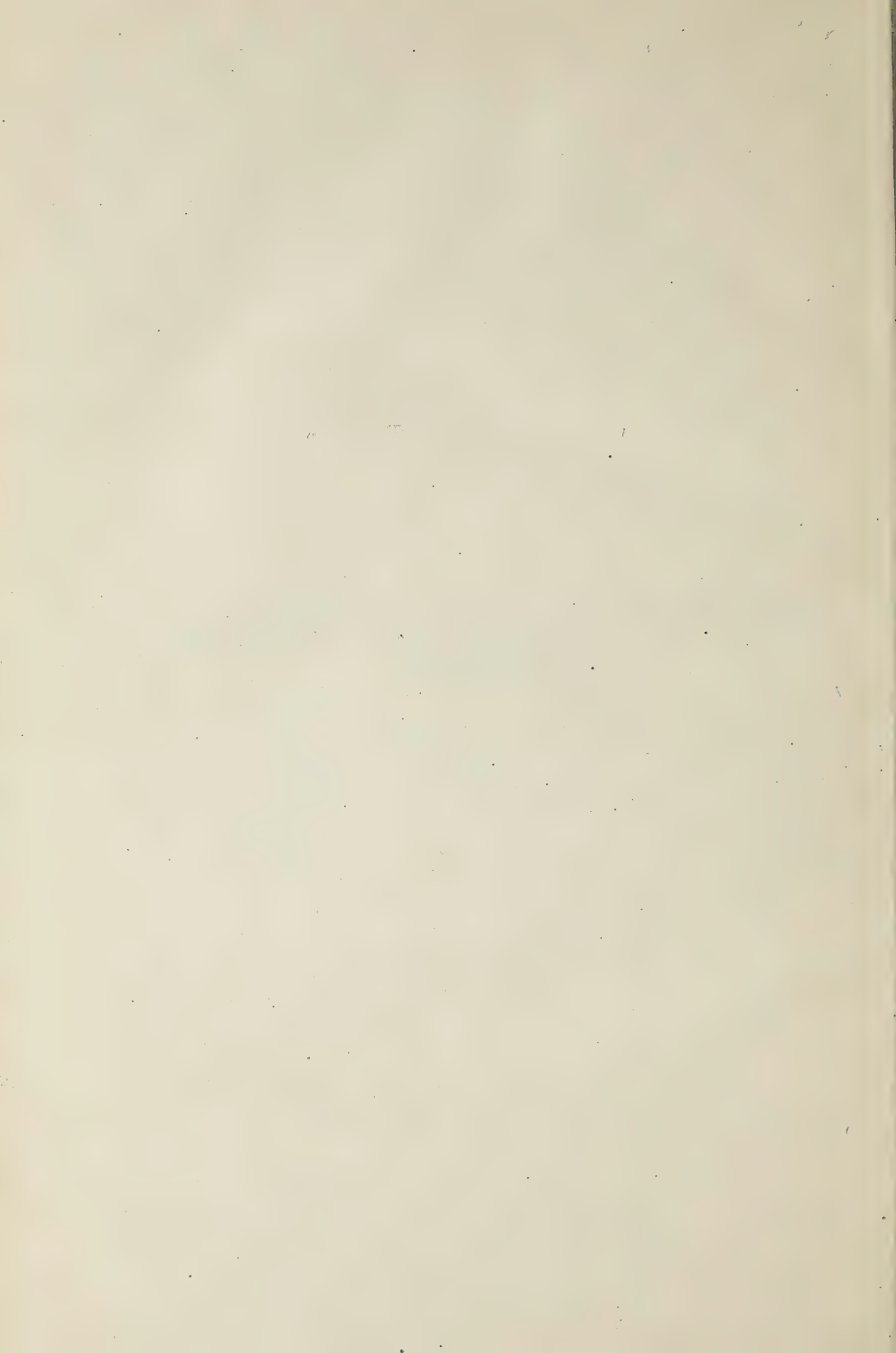
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**ANNUAL REPORT OF THE SUPERINTENDENT
OF SCHOOLS.**



ANNUAL REPORT OF THE SUPERINTENDENT OF SCHOOLS.

The scholastic year 1918-19 will live long in the memories of teachers and pupils on account of the unusual incidents transpiring. It has been a year of sharp contrasts, with elements of joy and of distress as well. The occurrence of the influenza during the fall presented situations never before experienced in the history of our city. The school system was by no means demoralized by the epidemic, and school sessions were suspended for a shorter period in Boston than in many other communities. In fact, the schools were closed only when the number of teachers, substitutes, school doctors and nurses who were victims of the influenza had become so numerous as to make it impossible to conduct the schools. The spirit of devotion and sacrifice exhibited by our teachers, doctors and nurses who were free themselves from the disease has been noted before in the reports of the Press and of official agencies such as the State Board of Health and the State Committee of Public Safety. Instead of fleeing the plague our teachers, employed to render a wholly different and less hazardous public service, went into the homes of the afflicted, nursed the sick and performed the cares of the household when there was no one else to do so. As was to be expected, a number of our teachers in their zeal to assist at the time of public distress became themselves the victims and several of them gave their lives.

The ending of the war, or the declaration of the armistice on November 11, 1918, occasioned a spectacle in our city beyond description. By order of the School Committee, the schools were closed for a day and a half and the children given opportunity to participate in the general rejoicings. The occasion was particularly significant for the young who may be expected to transmit to other generations the account of the joyful manifestations of the people at the ending of the greatest war of all times. In the memories of the school children of Boston, this year will stand out vividly throughout their lives. The spectacle of the returning soldiers, the great parade of the New England Division, the public peace manifestations, will fix

memories which augur well for the future character of patriotism and citizenship of the boys and girls now in our schools.

THE SCHOOLS AND THE WAR.

During the past two years the schools have shown in the hour of stress and need that they are essential parts of the strength of the nation. The children have been an important unit in the mobilized forces of the nation. War coöperation has been a dominant feature of school life during this period. The children have been asked to help in many ways,—there was food conservation, fuel and light restriction, War Savings Stamps, Liberty Bond campaigns, Junior Red Cross membership; and in all these endeavors the children did their share enthusiastically, cheerfully and effectively. During the war our schools have presented to the children the opportunity of living instead of offering merely a place for preparation for living. The war has brought a new motivating force into educational methods. Some way must be found to continue the use of stimulating interests in school work. Motivation rather than method is bound to be given larger place in educational enterprise. The appended report of Assistant Superintendent Mellyn concerning the development of the project method is very suggestive of a sane and valuable educational tendency.

THE TEACHERS' COUNCIL.

It is gratifying to point to the marked spirit of harmony now existing between the executive officers and the teaching force. Such a spirit is to be expected when the effort is made to focus the attention of both the executive and the teacher on the common purpose which each serves, namely, the welfare and education of the child. The function of the executive is not solely to rule, nor that of the teacher merely to obey, but rather it is the duty of each to improve and instruct children, each in his own way and in accordance with the instruments which he uses. A conscious effort has been made to make our school system increasingly democratic. The school council organized under the former superintendent, Doctor Dyer, has become a larger factor as a medium of expression of the attitude of the teaching force, both with regard to questions affecting the educational outlook and the economic welfare of the various ranks of teachers. The School Committee has been impressed with the sense of fairness and the

spirit of coöperation exhibited by the Teachers' Council, and in the comprehensive revision of the Rules and Regulations of the School Committee completed during the year past has incorporated therein formal recognition of the Teachers' Council. It is expected that the work of the council will become increasingly effective in the expansion of the spirit of good will and mutual understanding so happily developing at the present moment.

EDUCATIONAL COÖPERATION.

The year has also been marked by a spirit of professional coöperation in the development of educational practice. An illustration of the fact is seen in dealing with questions concerning the development of intermediate schools. A joint committee of three intermediate school principals and three high school head masters, together with two members of the Board of Superintendents, gave unremitting time and attention to the problems accumulating within the past few years by this newer educational endeavor. At the end of the deliberations of this representative educational committee, all differences were solved and by this joint counsel a new and constructive series of recommendations were evolved which constituted the official directions issued to all concerned in the conduct of intermediate schools,—pupils, elementary teachers, high school teachers and executives as well.

The attention of the reader is directed to the special report of Assistant Superintendent Ballou, wherein is contained a specific account of progress made in connection with the development of the intermediate schools.

PRINCIPALS' MEETINGS.

The attempt has been made to vivify and give larger value to the monthly meetings of the principals of our schools and the superintendent. At these meetings the guiding principle during the year past has been to emphasize to the service the talent and merit of the members of our own system. The meetings formerly called for 4.15 o'clock p. m. have this year taken place at three o'clock p. m. One hour has been taken by the superintendent for the presentation of matters coming to his attention from the School Committee, the public or from other and varied sources. At four o'clock p. m. the meeting has been dissolved into section meetings of the various

groups — high schools, elementary schools, intermediate schools. Section meetings are under the leadership of assistant superintendents especially assigned to the particular types of schools. The plan during the past year has offered opportunity for more active participation in the programs on the part of those attending, as well as for the presentation of the talents of the members of our own force.

THE COLLEGE SECTION OF THE NORMAL SCHOOL.

Considerable attention has been devoted during the past few years to matters affecting the progressive improvement of the Normal School. Only recently has the course been lengthened from two to three years, and a substantial part of the course of study placed upon an academic standard to warrant and receive college credit. Building upon these constructive acts of the past, much attention during the current year has been devoted to the improvement of the preparation of the college section, made up of young men and women, recent college graduates, who spend but one year in the Normal School. Our Normal School was originally designed for the professional training of young women, high school graduates, desiring to serve as teachers in elementary schools. The school has well served this initial and fundamental purpose. Both the character of the corps of instructors and the teaching equipment were designed for this aim. It seems apparent that an institution dealing with young people of one educational stage of attainment, that of the high school, and at the same time with no greater resources to attempt to meet adequately the needs of a very different group, namely, graduates of colleges, was attempting a task too uneven to receive the best results. The plan adopted by the School Committee this year contemplates dealing with the college section of the Normal School by a plan of coöperation with higher institutions, better equipped to give the specialized instruction which college graduates require. The plan adopted briefly is this: The college section of the Normal School will pursue practice work for five months in our own schools as heretofore. The professional work in the theory of education will be conducted in two coöperating higher institutions, Boston University and Boston College, for a succeeding period of five months. Successful students of this course will earn a degree known as that of Master of Education, and will be given credit by the Board of Superintendents for two

of the required three years for a high or intermediate school certificate. Successful candidates at the conclusion of the course may take the examination for the certificate qualifying for the rank of junior assistant in day high schools, which certificate is soon to be extended to similar eligibility in the intermediate schools. Summarized, we may say that the change simply means that students in our college section will secure a more adequate training in educational theory than would be possible under the former plan, and in addition will obtain a testimonial of this achievement in the form of a degree (Master of Education). The usual procedure of examining and selecting the candidates and charging tuition for nonresidents has been maintained. The special report of Assistant Superintendent Mellyn, which is appended, contains a more detailed account of the plans adopted for the college section.

EXTENSION OF THE MERIT SYSTEM OF PROMOTION.

The merit system of appointment in the Boston school system has been extended to include a rated list from which are appointed elementary school principals, and, in the case of women, teachers of certain other ranks such as assistant director in the department of practice and training and master's assistant in the day elementary schools. This is a logical step, since a merit system based upon objective evidence of merit cannot be considered complete until all positions in the school service are filled as the result of a uniform procedure. Eventually every promotive position in the school service ought to be filled from rated eligible lists. A considerable advance in this direction has been made in the case of appointments of elementary school principals and in a more limited degree in the case of masters' assistants. In addition, male assistants who are candidates for promotion to the rank of submaster have been rated on a more definite basis than formerly. Male candidates for the position of submaster who are not in the employ of our city have been appointed from rated lists for many years. The placing of male assistants in Boston on a similar basis is entirely appropriate and renders the procedure of appointment uniform in both cases.

Rated lists for the position of master's assistant have presented many difficulties to the Board of Superintendents, principally because of the large number of teachers holding certificates of eligibility for this position. Over eight hundred

elementary teachers hold these certificates of eligibility, which up to the present time has made it impossible for the Board of Superintendents to attempt the preparation of a rated list. In June, 1919, the superintendent nominated candidates for the position of master's assistant from the women's eligible list for elementary principalships. This was done in accordance with the theory that the principal's list presented the best evidence of merit obtainable in view of the absence of a rated list for the position of master's assistant. Evidence of merit for a higher position appears competent when seeking the best evidence of merit for a lower position.

Under Superintendent Brooks, masters' assistants were appointed largely on the recommendation of the principal of the district, with the approval of the assistant superintendent in charge. This practically resulted in limiting the candidates considered to those within a given district. While the development of the merit system at that time did not make another procedure possible, the method was unfair in that teachers longer in the service and possibly better qualified might not hope for promotion to a master's assistantship unless, perchance, a vacancy occurred in the district where they were serving as assistants. With the appointment of a director of promotion in April, 1914, Superintendent Dyer called a meeting of the masters' assistants, on April 23, 1914, and announced that hereafter candidates throughout the city would have equal consideration in seeking the position of master's assistant and that the competition would be on a city-wide basis rather than limited to the district in which the vacancy occurred. Following this announcement the superintendent secured ratings of candidates from assistant superintendents, masters and the director of promotion, and based his nominations upon informal lists of candidates prepared on the basis of such ratings. If there appeared a candidate in the district whose ratings were highest, naturally she was appointed. Furthermore, if her teaching ratings were equal to the ratings of candidates elsewhere in the city, the principal was permitted to nominate such candidate, but the former superintendent discouraged principals from nominating a candidate who did not meet the above qualifications. It was usually possible to find a superior teacher within the district, so that appointments generally remained within the district. It must be remembered that ratings in this procedure were limited to judgments upon

class room teaching, that additional elements of merit such as professional study and growth were not formally evaluated. The difference between an informal merit list and a rated list depends upon the number of elements of merit given consideration. A formal rated list endeavors to take into consideration all the possible significant factors of merit, such as educational preparation, professional interest and growth, class room teaching, length of experience. In the past the practice was to appoint masters' assistants from informal ratings (class room teaching); the present practice is to promote from formal rated lists, in so far as they may be secured.

It will be seen, therefore, that the practice during the preceding administration did not really result in placing the promotion of women to the position of master's assistant actually on a city-wide basis. While consideration was given to candidates in other districts, few candidates were selected as a result of such consideration. The practice of the present administration is to carry out the announced purpose of the preceding administration, viz., placing the appointment of masters' assistants on a city-wide basis. Instead, therefore, of preparing informal rated lists, the list of women who hold not only masters' assistants' certificates but also hold masters' certificates was chosen who do not now hold the position of master's assistant has been carefully rated, and the evidence concerning their qualifications and professional standing is abundant. In other words, the professional standing of those candidates on the masters' list who do not now hold the position of master's assistant has been carefully investigated and the rating is based upon more comprehensive evidence concerning those candidates than any informal list heretofore prepared. Furthermore, these women are located all over the city, and the presumption is that since they are holders not only of masters' assistants' certificates but also masters' certificates they are leaders among the teaching profession of Boston. It seems justifiable, therefore, to give first consideration to the names of women on that list when appointments to the position of master's assistant are to be made.

It will be seen that the present practice of the superintendent's office is in complete accord with the spirit of Mr. Brooks' administration as well as with Mr. Dyer's administration. The present practice of appointing masters' assistants is analogous to the new step which has been taken in the preparation

of the appointment of principals of elementary districts from a rated list. Since over eight hundred women in the service hold certificates qualifying them for the position of master's assistant, it seems a hopeless task for the Board of Superintendents to undertake to rate all these candidates. Steps have been taken, however, to rate at some early date, a considerable number of those best qualified for service. In the meantime, the adoption of the present practice of nominating candidates from the masters' list seems most defensible in the effort to make appointments from the best evidence of merit obtainable. Attention should be called to the fact that the present step is neither sudden nor revolutionary but the result of a gradual development of the policy of making all promotions on a merit basis. School Document No. 2, 1918, gave notice to the service of the hope of the Board of Superintendents to make a progressive move in the way of securing better evidence of merit in the case of promotion to the position of master's assistant.

The attention of the reader of this report is directed to the special report of Assistant Superintendent Burke concerning the method employed by the Board of Superintendents in preparing the present rated list for elementary school principals. The position of principal of an elementary district in our city is one of great trust and responsibility. The welfare of thousands of future citizens is dependent upon his care, intelligence, inspiration and leadership. Only the most competent should be selected for these positions and the most careful method of judging candidates should be maintained in determining those best qualified to serve as masters of elementary school districts.

MAKING SCHOOL BUDGETS.

In various communities in the past there has arisen difference of opinion with respect to the appropriate school officer who should prepare the school budgets. In our city we have not escaped these differences. The Finance Commission report (1916) on the Boston school system gave considerable attention to this problem. During the year past a coöperative plan of preparing the school budgets was adopted. The School Committee requested the Board of Apportionment, made up of the superintendent, two assistant superintendents and the business agent to prepare both the general maintenance budget and the land and building budget. In this latter budget the Board of Apportionment received the assistance of representa-

tives of the Schoolhouse Commission. Coöperation instead of competition among school officers has proven a happy solution of a problem which has presented difficulties in the past. Budget making is peculiarly an apportionment problem. Initial drafts of budgets made up by tabulating the estimates of numerous department heads, principals and directors, based upon the commendable desire of each for expansion and greater effectiveness, always exceed substantially the amount of money available under the law for school purposes. The scaling down of estimates cannot be done automatically or by percentage reductions. A joint and balanced judgment needs to be brought to bear upon the complex questions of relative educational needs as well as general financial policies. As stated before, educational authorities differ as to whether an individual — such as a business agent, or a superintendent of schools, or a representative board — such as a board of apportionment, should prepare tentative school budgets for the action of school boards. Where many persons help in formulating policies, they feel an interest and concern in the results. Where one acts for all, the many are either indifferent or fault-finding. Educational democracy means the participation in decisions by the many and the sharing of responsibility by all. In our school system we have adopted for present use the representative board and with good results. The School Committee found little to modify in either the budget for general maintenance or that for land and buildings.

ANNUAL PROMOTIONS OF PUPILS.

In the effort to provide greater elasticity in the grading and promotion of pupils, and to reduce retardation, nearly all great cities of the country have adopted a plan of promotion either semi-annually or, in some cases, quarterly. The Boston school system has not as yet adopted this innovation and still retains the traditional procedure of annual promotions. There is much to be said in favor of both the new and the old plans, for it has not been demonstrated beyond doubt that promotion oftener than once a year is superior to the older plan. There is a growing body of evidence, however, to the effect that the more frequent promotion is to be preferred. The arguments are these: The pupil who falls behind his grade does not lose a whole year in his school career but only a briefer interval. The shorter interval makes possible a closer gradation. The

pupil entering our schools from another system can be assigned to a class nearer his attainments, especially when there is doubt as to his ability to do the work of the grade to which he aspires. Pupils who drop out of school in the summer to go to work and fail to return in September often desire later to return to school. They are behind grade, however, and in the middle of the year they cannot enter the class they have left and there is little incentive to re-enter the grade which they have completed. Again, on the half yearly plan, and still better on the quarterly plan, advance credits can be earned in the summer school and the child may save substantially the total time taken to complete the course. Frequent promotions make possible the successful conduct of the all-year school enterprise, an experiment not yet attempted in Boston and one which should not be further neglected. The all-year school plan does not mean that all pupils are to attend school continuously, but only that certain continuous schools, both elementary and high, shall be maintained, giving the option, especially to older and retarded pupils, for attendance at school throughout the year. The present plan of annual promotions in Boston makes it impossible to attempt the maintenance of all-year schools.

The arguments against the adoption of more frequent promotions are serious and cannot be ignored. They are primarily pedagogical. The frequent promotion plan involves on the part of the child a frequent change of teachers. Many educators believe that it takes the teacher a considerable period to understand and appreciate the individual pupils of the class. The frequent promotion plan means that just as the teacher has the class well in hand there is a reorganization and the process of getting thoroughly acquainted has to be begun again. The most valid argument seems to be that a system of promotion based upon the needs of the minority should not be adopted to the detriment of the majority. The number of pupils retarded, of those who wish to go to school continuously, and of those who go to work and afterwards wish to return to school, all are but an inconsiderable part of the whole group. It is claimed that the present plan best meets the needs of the majority of our pupils.

In justice to our school system it should be stated that many things are done to keep our system of promotion elastic. The summer sessions of both elementary and high schools give

opportunity for those who have failed in individual subjects to regain standing. The present plan of organization of intermediate schools and upper grade classes of regular elementary schools provides for the principle of promotion by subjects, instead of by classes. This means greater elasticity and less retardation. During the past summer opportunity has been afforded in the summer high school for pupils to attempt to advance credits. Whether it is possible for pupils to achieve in a six weeks' period by intensive work the standards necessary to assign a year's credit is not now known, and seems improbable. There are no relative statistics to show that Boston has an unusual number of retarded pupils in the schools, in spite of our retention of the annual plan of promotion. Much attention and study should be given during the current year to determine whether Boston should continue the present plan of annual promotions or attempt the more frequent plan now customary in other large cities. Unfortunately, we cannot make experiments with a few schools to test out this theory. Either all the schools must make the transfer or none — else, otherwise, there could be no transfers between schools, and no orderly procedure from elementary to high schools.

SALARIES.

Because of the relation between our efficient corps of teachers and the compensation available it seems important to make a statement concerning the salaries now paid our Boston teachers. The School Committee has given unremitting attention to this subject and the increase of salaries voted a year ago is evidence of this fact. General economic conditions, affecting not only Boston but the nation, and indeed the world, have caused the question of still higher salaries to become again pressing. The present cost of living is too patent to occasion discussion here. The question before Boston is how relatively with other groups our teachers are to fare; how in the greater financial returns of other callings, even those unskilled, we are to attract superior men and women to be the instructors of our youth. The argument used by the trustees of Phillips Andover in seeking larger funds for instructors' salaries was to the effect that an investigation showed that carpenters were receiving more than professors. Many striking contrasts between the compensation of industrial and business employees and that of teachers could be made. The new wage scale for the Boston Elevated gives to women

money changers as much as is paid to a master's assistant in our schools, and more than twice as much as the minimum salary for an assistant. It is true enough that competent men and women have not chosen teaching as a profession solely for the economic rewards offered to school teaching. Teachers have always been underpaid, but the present differences of financial returns obtainable in teaching compared to that received in other callings are becoming so great as to threaten the probability of recruiting with the caliber of teachers usual in the past and desirable in the future. There is indeed some relation between compensation and self-respect. The poorly paid teacher cannot command the respect of pupils and parents, nor maintain the influence in the community hitherto exercised. If education is vital to the existence of our institutions, then those who carry the burden of instructing the youth must be better maintained by the community served. A poorly paid teacher cannot do efficient work for her children. She must be assured of a reasonably comfortable standard of living and some opportunities for self-improvement, travel and study. For the sake of the children the community must see that the compensation given to teachers be that which assures the self-respect of the teacher and enables her to live in a way most conducive to effective service in the class room. For these reasons then it is necessary to call attention to the present need on the part of the city to deal more justly with our teaching force. The extraordinary economic condition now afflicting our community and the whole world has raised the issue. If communities or nations are to emerge from the disturbed state of affairs, more and better educational facilities must be provided. We need not weaker men and women to perform the function of education, but the strongest and the best, and we must provide the wages of the skilled where now we hardly equal the compensation of the unskilled.

THE BOSTON CONTINUATION SCHOOL.

In September, 1918, the Continuation School was confronted with the problem of caring for thousands of children who, under conditions due to the war, left the regular schools to go to work. The enrollment of the school reached its peak at the end of November with 6,542 boys and girls at work.

This increase in numbers had been anticipated and was adequately met by adding a new sheet metal shop, an additional

electrical shop, an additional power machine shop and by taking over additional rented quarters at 278B Tremont street. In spite of the difficulty of finding teachers to take the places of men teachers who had entered the military and naval service, this problem was adequately handled.

A room for ungraded classes was found in the Damon School in the Hyde Park district. Its use saved the children of that district the long and tiring trip into town to the central school.

The influenza epidemic resulting in the death of the mothers of the families concerned, threw the responsibility of household management upon a number of young girls. A teacher was assigned to give instruction to these girls in their own homes. The experiment was in many ways successful and with some modifications will be continued next year.

With the signing of the armistice and the business depression which followed the holiday activity a serious condition of unemployment began to develop. The Continuation School presented the facts to the Principals' Association with the result that very effective work was done in retaining pupils in the elementary and the high schools. This resulted in a rapid shrinking in the number of pupils in the Continuation School so that by the end of June the enrollment had dropped from the high mark of 6,500 to 5,466. Plans are already prepared for further efforts along this line in September. The lure of employment has drawn away hundreds of children who should have completed the elementary course or have gone on to high school. An intensive campaign is under way to return as many as possible of these children to the day schools at the beginning of the school year.

The employment department of the school has done commendable work in replacing out-of-work children in employment, with the consequent cutting down in the average period of idleness. Complete figures are not available. A measure of the scope and value of this work is given in the fact that during the four months from February to May, inclusive, 1,124 boys applied to the school employment bureau for work and of these 559 were definitely placed. Figures are not obtainable to show how many others gained employment indirectly through work of the school.

The value of the guidance and control which the Continuation School exercised over these children during this trying period is indicated by the fact that truancy and other delin-

quency were less than ever before and that the children for the entire school year maintained an attendance record of slightly over 96 per cent.

During the year the teachers of the school as part of their improvement program coöperated to work out detailed courses of study. This material is not ready for the printer. Plans are under way to have it published in the near future. The school constantly receives requests from all over the United States for detailed information on organization and methods of procedure. During the past year the Federal Board for Vocational Education has made considerable use of information gathered from this school.

The school now has a teaching staff adequate in point of numbers and has built up a very satisfactory equipment. Housing conditions, however, are bad. It is to be hoped that they will be remedied very soon.

TRADE SCHOOL FOR GIRLS.

The removal of the upper age limit of twenty-five years has permitted us to give either preparatory or advanced instruction to over four hundred women who, because of war conditions, were forced to seek employment for the first time, or needed some special training in order to move up to more highly paid positions in their regular occupations. The original time limit upon the operation of this law, to one year after the close of the war, has recently been removed, so that the Trade School will be able to continue to offer its services to working women of any age.

The unprecedented demand for unskilled labor at increased wages has had the same effect upon the Trade School for Girls as upon other secondary schools; that is, it has decreased the number but improved the quality of the student body. Because of less crowded conditions and a better type of pupil, the school work has improved correspondingly in the training of the workers and in quality of output. This is made evident by the ever-increasing calls for our girls from the best type of business houses in the city and by the increasing initial wage offered, as well as by the rapid rise of many of our girls to positions of responsibility as drapers, designers, forewomen and teachers.

BOSTON TRADE SCHOOL.

A noticeable feature of the registration last September was that it was larger than in any previous year and it was the only

secondary school of which this was true in 1918. The departments maintained were the same as in previous years, but were operated under more favorable conditions of larger space and better equipment.

From the beginning the school has emphasized a two-year course, endeavoring to round it out so that the students entering industry at the completion of the course shall be found fairly well trained and conversant with the usual shop practices. In view, however, of an increasing demand for a more extended course the School Committee adopted the third and fourth year courses.

The atmosphere of the school has been made still more inviting by the introduction of military training and athletic sports for which special instructors have been provided. Music has been developed to some extent, although not until next September will regular instruction be given. Several concerts, however, given by the Glee Club and other members of the school, have served not only as sources of interest to the students but have furnished an opportunity for bringing parents to the school. The use of the moving picture machine has been increased by securing and displaying a liberal number of films from manufacturing concerns, the same being used to illustrate various processes used in the manufacturing establishments.

The war and its results affected the work of both the day and evening classes as follows: To meet the demand there were established courses in airplane construction and repair and wireless telegraphy in both the Central School and the North End branch. These courses, however, were discontinued after the signing of the armistice.

The expansion of the school is illustrated by the addition of the North End branch to the previous group and by the introduction of day classes for rehabilitation of wounded soldiers, which work is now going on with the possibility of indefinite continuance. The desirability of continuing such work for re-training men injured in industry is being emphasized. The work in this line during the regular school time led the Federal Board for Vocational Education, Department of Rehabilitation, to ask the forces of the school, with some additional ones, to conduct classes through the summer for re-training of wounded soldiers. The courses thus rendered include fifty per cent of practical shop work and fifty per cent academic work along the lines of English, mathematics and drawing. How much longer

this work will be continued after the summer term depends upon the policy of the War Department at Washington.

One of the demands of the soldier students was a course in automobile repair. The equipment for the course was speedily obtained and the work begun. It should, however, be added to the regular day school course and provision should be made for evening classes, for which we are informed by the State Board there is great demand. To this end means should be provided for increasing equipment, which so far has been secured to a large extent gratuitously.

The school has been fortunate in acquiring a goodly amount of machines and tools from the Federal Government, thereby enabling the department of machine shop practice to increase its numbers and expand its work.

DEPARTMENT OF MANUAL ARTS.

Coöperative Courses in High Schools.—The coöperative work in the high schools has increased to such an extent that two coördinators have been appointed, one in Hyde Park (in machine shop practice) and one in Charlestown (electrical work). The courses in these two schools and in East Boston High School (machine shop practice) are growing rapidly.

The economic value of coöperative work to the families of the boys involved is shown by the fact that the wages of boys in this department in the Hyde Park High School, where there were sixty this last year who were out in the shops on part time, amounted to nearly \$15,000. A beginning has been made to bring together the different academic teachers of related work in coöperative industrial classes to formulate syllabi which will be helpful and which will standardize the instruction as far as practicable. A committee has been formed and work undertaken for the formulation of such a document in mathematics.

The new course in vocational agriculture established in the West Roxbury High School in the fall of 1918 has had a very successful year, and the number of applications for enrollment in September, 1919, far exceeds the present accommodations.

In the latter part of May an exhibition of prevocational work was held in the hall of the High School of Commerce. The panels exhibited by the different trades showed the intensive correlation and tie-up between the shop activity and the academic work. The exhibition was well worth while, and was an indication that the prevocational principles as applied are sound.

With the appointment of foremen of shop work it has been possible to make a more careful study of the shop conditions and shop needs of the different trades represented. Each trade is now in charge of a foreman whose duties in addition to those of instructor are to hold meetings with his tradesmen, and decide on policies, courses of study, devices, etc., which are submitted to the assistant director in charge for his approval and action.

Careful analysis has been made of the conditions under which each trade is working, and of the teaching aims to be observed, with the result that the minimum requirements which have been in use have been amended and supplemented, and tentative courses of study prepared for trial the coming year.

Gardening.—Several new activities have been added to the gardening work. A plan for the training of Normal School juniors and seniors in gardening supervisory work has operated very successfully and should be of great value in overcoming the present shortage of trained garden teachers.

Some very effective and significant work in canning the products of the children's gardens was made possible through the coöperation of the Women's Committee on Public Safety, who met the expenses of janitors' fees, fuel, etc., in connection with the use of school kitchens.

Several elementary schools have included gardening demonstrations and experiments dealing with garden practice, in their science work in the upper grades and report a distinct gain in the science instruction as a result of this interesting application of fundamental scientific laws.

PHYSICAL TRAINING AND MILITARY DRILL.

Physical Training.

"Physical Training" is the term used to cover a wide field of activity. Within it is included gymnastics in the Boston Normal School, high school and elementary school gymnastics, military drill, high school athletics, elementary school athletics, and playgrounds.

Every girl in the Normal School is required to take physical training twice a week for the first two years. Each lesson in the gymnasium is followed by a shower bath which greatly increases the benefit of the lesson. In the third year she has a similar lesson and one period in the class room where she studies the theory of physical education and the method of teaching it. In the first two years the girls become familiar with the

elementary course of study. Each girl has an opportunity to teach physical training to the children in the model school. Besides the educational value of physical training, the benefits to good health through proper exercise and good posture are emphasized. A course in playground activities and organization is given throughout the three years. Inter-class games and meets are frequently held in order to have the girls become more familiar with the management of such games, as well as to emphasize the spirit of fair play and good sportsmanship.

In the high schools two full periods a week are given to physical training for girls, and, in addition, a ten-minute setting up drill is given every day in every room between the second and third periods.

In the elementary schools the work is carried on by the grade teachers, under the supervision of the high school instructors who are detailed to the various school districts. Between twelve and sixteen minutes per day—the time varies in different grades—is given to gymnastics. Beginning with the first grade and continuing through the third, the work consists of story plays, games, rhythmic exercises and simple dances. Formal gymnastics are introduced in the last half year of the third grade and form the principal part of the gymnastic course in the succeeding grades. The course includes, also, games and dancing in the regular school session, and, in some of the schools, organized play at recess.

Military Drill.

Military drill has existed in the high schools for nearly sixty years. Established during the troublous times of the Civil War, it has come to the present day with various modifications. It is now compulsory for each boy during the four years of his course unless, for physical disability, he is excused by a school physician. High school boys attend drill two periods per week, which makes a total of about three hundred hours for the four years. The Boston School Cadets, numbering in the neighborhood of six thousand, are organized into eight cadet regiments. Promotions are graded so that during a boy's second year he may become a corporal; a sergeant during the third, and a cadet commissioned officer his senior year if his skill and conduct merit it. Promotions to cadet rank, however, are also dependent upon the attainment of certain standards in studies. Military diplomas are awarded to commissioned officers.

The military course includes close and extended order infantry drill; much stress being laid on physical development, the United States Army physical drill occupying a considerable portion of the time each fall, and never being entirely discontinued throughout the year. Indoor rifle shooting, and a daily ten minute setting up drill between the second and third periods also form a part of the course. Each boy furnishes his own uniform, which is of khaki, with suitable cadet distinctive markings of black. The entire military equipment, — rifles, colors, belts, musical instruments, etc., is the property of the city. The Department of Military Drill is conducted by military officers, four of whom were in overseas service during the Great War.

Athletic Coaches.—Athletics.

A corps of twelve teacher coaches conducts athletics in eleven high schools and in the Boston Trade School. This system has proved superior to that of the professional coach. These men, as their name implies, serve the School Department in a dual capacity. Being in close touch with the whole school during school hours, they have excellent opportunity to interest large groups of boys in athletics, and their responsible control has resulted in a distinctly higher tone and quality of competitive sport. The number of boys engaged in athletics during the past year,— 705 in football, 1,194 in track, 925 in baseball and 155 in soccer — is evidence that the system of faculty-coaches is achieving its purpose, *i. e.*, the largest possible number of boys are engaged in some form of athletics. The reports for the past year show that with over 3,000 boys in games, only two accidents have occurred,— one a broken nose, the other a dislocated shoulder. No ill results have followed from these.

Boys may obtain three points towards a high school diploma by "membership, good conduct, and regular training" in a recognized athletic squad for three years, or by showing progress during the second, third and fourth years over the records made in the year preceding in dashes, jumps, shot puts, pull-ups push-ups, and posture. They may obtain an additional swimming point during any one of the four years by swimming fifty yards. These four points, plus the four points for military drill and setting up exercises, are necessary to obtain a high school diploma.

Organized School Play.

During the past school year sixty play-teachers directed the play of the boys of the Boston elementary schools on forty playgrounds in the various sections of the city. These play-teachers were recruited mainly from the ranks of the submasters. They did their work on school days from 4 to 5.30, soccer being the game of the fall season and baseball and track of the spring season. The former was of six weeks' duration, the latter of eight weeks. Games were organized rather for interclass than for interschool contests, as being the better means of giving opportunity for play to the greater number of boys. On some playgrounds, however, interschool contests were played about once a week. Experience has shown that organization of games made at the schools rather than at the playgrounds results in better play and greater participation on the part of the boys. The total number of boys taking part in the play activities of the year was over 25,000. In June a Relay Carnival and a Track Meet were held on two separate days, participated in by boys from all the grades of the elementary schools. An innovation was introduced in September—the appointment of a corps of four supervisors, each to oversee the work of a section of the city.

PUBLIC PLAYGROUNDS.

The seventy-three playgrounds of the city consist of thirty-six school yards and thirty-seven park corners. Activities begin with the opening of the spring term in April, continue through the summer and end at the expiration of the fall term in November. The summer session is from 9.45 a. m. until 5 p. m. daily. In spring and fall it is from 3.45 until 5.30 p. m. on school days and from 9.45 a. m. until 5 p. m. on Saturdays. The playgrounds are open to all children whether from public, private or parochial schools, and attendance is voluntary. The numbers vary, according to the size and location of the playground, from 150 to 500 children per day. The personnel is made up of young women who are Boston Normal School graduates and students, and are rated as "first assistants," "assistants," or "sand-garden assistants," according to length of service. In the fall and spring these teachers have charge of the girls and younger boys, carrying on with them organized play, and supervising the free play. In summer the

longer hours afford opportunity for more extensive activities. These include, over and above free and organized play,— which are continually going on,— dancing, story-telling, dramatics, inter-playground contests in various games for both girls and boys, culminating in a final athletic meet to decide the winning teams of the city, and war relief work,— such as sewing, knitting, etc. Large numbers of children, with 50 as a minimum and 300 as a maximum from one playground on one day, are taken on various excursions several times during the summer.

KINDERGARTEN DEPARTMENT.

The Kindergarten Department reports 154 kindergartens and 289 kindergartners — an increase of 9 kindergartens and 14 kindergartners since January, 1918. Eleven of these kindergartens hold their session in the afternoon, a time far from satisfactory, since the session is one hour shorter than that of the morning class, and the children, after a morning of strenuous play, are tired and are inclined to sleep, or if they are of the nervous type are apt to be over-stimulated; however, afternoon kindergartens are better than none and they should be retained until better accommodations can be secured.

The above registration gives one or more kindergartens in every school district in the city, but does not accommodate all the children from four to five and a half years of age who are ready for the kindergarten. This is especially true in the sections where non-English speaking people reside, where the kindergarten enrollment is heaviest, but where for lack of schoolhouse accommodations many children of kindergarten age are still without school privileges.

Experiments along the line of the Project Method in several of the kindergartens have aroused a general interest in children's choice of occupation and its reaction in the form of intellectual and physical development. Further extension of this work is planned for the coming year in selected kindergartens where thoughtful consideration of the effect of freedom upon the class as well as on the individual will be noted.

Conditions brought about by the war have reawakened the world to the necessity for the conservation of childhood. The kindergartners, through their ready access to the homes, have had rare opportunity to promote this cause and have strengthened their relation with the mothers of their community through the actual assistance they have been able to render at this time

of need. Classes of kindergartners were organized under leaders furnished by the Government, who gave instruction on food and clothing conservation; this in turn was simplified and demonstrated in nearly every district in the city to groups of mothers who were striving to meet the new conditions without success.

Records show fully three hundred mothers' conferences based on this subject during the last eighteen months. Special talks have also been given on food values and their specific relation to the growing child; also talks on clothing and on the physical care of children. The friendly relation which exists between the kindergartner and the mothers has made it possible to make such talks productive of good results, as has been shown many times during the year in the reaction from the homes.

In localities where several nationalities are represented the kindergarten becomes a center where the common interest of child welfare opens the way to the work of the Americanization classes where opportunity is given to study our language and customs. In a few instances the local kindergartner has taken charge of the class under the direction of the director of the Americanization work for two afternoons each week. Reports from several kindergartners note the personal directing of reading courses for foreign mothers who have learned to read but who, for various reasons, are unable to go to evening schools.

The records for the past year show over 650 meetings with an attendance of 14,600 mothers, averaging 23 mothers at each meeting. Nearly 1,000 children have been recorded as attending the meetings also, since it frequently happens that there is no one at home to take care of them during the mother's absence.

We are only beginning to find our place in the education of the foreign woman who shares our rights of citizenship and who as the days go on will share it more and more powerfully. The kindergartners are discovering that the foreign-born mother has a message for us, and she only awaits the time when the present obstruction of a strange language is eliminated before she will take her place in our community. Our immediate task is to prove that we are a friendly people striving to do everything in our power to promote her welfare. In some localities this can be accomplished through personal visits in the home more satisfactorily than through the general assembly of the parents' meeting. Each kindergartner studies her community and acts according to her judgment in determining the

type of community work to stress, keeping in mind the fact that every step which improves the home conditions promotes the welfare of the child.

The custom of home visiting in every district in the city has become an essential part of the daily program of the kindergarten. In no other way can she obtain that full understanding of the individual child which is so vital in good teaching. Our records show nearly 28,000 home visits for the year and while the results of this branch of our work cannot be measured, we are certain that the kindergartens could not be maintained at their present standard of excellence without this close contact with the home.

THE RELATION BETWEEN HIGH SCHOOL AND COLLEGE.

The attitude of our Eastern colleges appears to be that education is primarily a selective process; that the needs of the community do not require an extremely large number of practitioners in many professions or careers for which the colleges offer training, but it is highly important that those who finally enter these callings should be the best possible selections. The colleges themselves apparently feel it is the wisest practice to begin the process of elimination before those whom they assume cannot hope for ultimate success have wasted years which might be used better in equipping them for probable success in other lines.

Our colleges, therefore, while aiming at the best service to the community along their specific lines of study, feel justified in admitting only the students most likely to achieve success in these fields, and in eliminating by their entrance examinations candidates likely to fail later if admitted. It is assumed that these candidates can serve the community better in industrial, commercial or other productive work which does not demand the kind of training offered by the colleges.

Where to draw the line is a matter of experience and judgment and President Lowell asserts that it is now drawn wisely, by saying: "A really good scholar from any good non-vocational school can pass its (Harvard's) entrance examinations." This should probably be amended to read, "A really good scholar who has taken certain studies prescribed in a somewhat restricted list of subjects."

President Lowell further states that the present variety of admission requirements for Massachusetts colleges is such that

"any boy who will profit by a college education can find a college in Massachusetts that he can enter."

In general terms, it may be stated that a candidate for admission to Harvard must secure a rating at the examinations of the College Entrance Board of 60 per cent or better. Yale, Princeton and a few others require the same rating, while most of the other Eastern colleges require 50 per cent or better.

The eighteenth annual report of the College Entrance Examination Board (the latest report) states on page 23 that for the past ten years with 60 per cent as a passing grade, 53 per cent of all answer books were passed, and 47 per cent were failed; in 1909, 47 per cent were passed and 53 per cent were failed; in 1916, 49 per cent were passed and 51 per cent were failed. In the year 1918, the figures in the respective subjects are as follows:

	Per Cent Passed.	Per Cent Failed.
English	49.6	50.4
Ancient History	35.2	64.8
Latin	59.9	40.1
Greek	67.5	32.5
French	58.	42.
German	47.2	52.8
Algebra	46.	54.
Geometry	55.6	44.4
Physics	52.9	47.1

These percentages of failure appear to be in excess of those naturally to be expected in case of reasonable correlation between school and college. For instance, in 1909, out of 7,000 answer books in Latin, only 38 per cent received a passing rating.

The mischief of the overemphasis of the selective function of education in the college is that a similar principle is forced upon the high school. From the above it will be seen that one in two fail to meet the present college entrance requirements, but it should be remembered that those who took the college entrance examinations were themselves a selective group. About one in ten who enter the high schools successfully finish the course. This is the national figure. The City of Boston does much better, graduating about one in three in the high school of those who enter the first year. The overemphasis of the selective function of education does not stop with the high school. In a

similar way, the high school imposes it on the elementary school because the high school wishes to receive only pupils who show promise of success.

The real function of education is service rather than selection. The business of the school is to improve each individual in accordance with his capacity, rather than to select individuals who can do certain things deemed desirable by the schools and exclude all others. It may be admitted that the special finishing school should be selective. It would seem that the primary function of education of all stages, whether elementary, high school or college, should be *service* rather than *selection*, which means the dealing with the individual as he is and improving him in accordance with his capacity. Should we not set up the ideal of service or improvement education rather than selective education, leaving the selective function to the special school, whether it be distinctly professional schools, such as the law and medical school, or lower types of vocational schools such as the trade school. The present selective function set up by all our administrative provisions emphasizes enormously the failures of education. The public mind is always focused upon the lack of capacity of individuals. Continually failures are counted rather than successes in dealing with human material. Human assets are made to seem small, human liabilities are made to seem enormous,—a pessimistic outlook upon humanity.

Democracy of educational opportunity means that there shall be many varieties of educational opportunity, because the powers and capacities of individuals differ profoundly. Any single kind of educational opportunity exercises a selective influence, which means, essentially, that certain individuals can succeed in that kind of opportunity and other individuals cannot. If the only means of educational opportunity were a Latin school, then only such individuals could be educated as were capable of successfully undergoing the selective influence of a classical preparation for college.

This does not mean the lowering of educational standards of the high school. What is needed is the establishment of a system of higher education in New England which will not impose through entrance requirements such restrictive and limiting influences on the high schools as the present system of higher education imposes. We need a system of higher education in the state which will furnish a greater variety of educa-

tional opportunities for the boys and girls who are today shut off from higher education through the present limited and, to my mind, undemocratic method of selection set up by present college entrance requirements.

Where shall the limit to free and popular educational opportunities be fixed? Shall it be at the end of the elementary school, intermediate school, high school or the college? There was a time, even here in New England, when our so-called "better people" opposed the extension of popular education beyond the elementary stage. Our present system of high school education has had opponents here in Massachusetts, within twenty years. The high school, however, has won out. It is now a part of the educational and democratic rights of all boys and girls. All parts of the United States, except New England, and particularly Massachusetts, have extended the range of educational and democratic rights to include the college. The day has come in Massachusetts to agitate the larger educational rights of all young people.

It is not to be desired that the high standards in certain colleges should be destroyed or lowered. Nor should the number of boys and girls who may use the opportunities which they offer be diminished. I believe we should seek to extend educational opportunity to the group not now reached. We wish to supplement our present excellent institutions by other and more comprehensive institutions wherein the principles of educational democracy may be expanded to meet the growing conviction that there is no dead line of education to be drawn for the boy and girl beyond which some may go and others may not. All extensions of education have proved to make for a finer and safer citizenship.

CHANGES IN MECHANIC ARTS HIGH SCHOOL COURSE OF STUDY.

For many years past the problem of a proper course of study for the Mechanic Arts High School has been given serious and persistent attention by the superintendent and the School Committee, also by lay advisory committees appointed by the School Committee to assist in friendly coöperation in studying the situation. In 1914, after several survey reports on a proper course of study for the Mechanic Arts High School, the so-called "Prosser Plan" was adopted. In general, the "Prosser Plan" meant the industrializing of the school. All other aims except that of training for industrial efficiency were eliminated. The

central idea of this plan was the purpose of training boys who resorted to the school to become "noncommissioned officers in industry." The plan has had a trial for five years, and its merits and shortcomings carefully observed. As a result of this body of evidence, it has appeared to the superintendent, the assistant superintendent in charge, the principal and teachers of the school, that certain modifications of the existing course of study should now be adopted. In the judgment of all concerned it was decided that the "Prosser Plan" should not be abandoned but supplemented by the addition of a parallel course giving wider opportunities to the students of the school. It appears unwise, however, to restrict the boys of the Mechanic Arts High School to one exclusive objective. The public viewpoint has changed considerably during the last five years, regarding the right of choice and the right of change of choice in the preparation for life activities. It is unreasonable to assume that a boy of fourteen when selecting the Mechanic Arts High School knows definitely that he wishes to prepare exclusively for the sole object permitted under the 1914 plan. During the high school period the boy makes wider contacts, he sees new opportunities and is likely to wish to change an original selection. Very often a boy does not discover his aptitudes and desires until well along in his high school course. While retaining the virtues of the "Prosser Plan" the new program permits of a modification of choice on the part of the student who may in the third or fourth year of the course pursue certain elective subjects which will lead on to life objectives other than those purely industrial, viz., that of preparation for higher technical institutions. In the appended report of Assistant Superintendent Brodhead will be found the detail of the changes in the course of study in the Mechanic Arts High School.

DEPARTMENT OF EDUCATIONAL INVESTIGATION AND MEASUREMENT.

The Department of Educational Investigation and Measurement has, during the past year, undertaken to continue the work of preceding years and to increase the scope of the testing of school accomplishments.

The testing was divided into two periods, one in February and one in May. In February we tested a small group of fourth to eighth grade pupils in silent reading. The tests

were organized by the department, coöperating with a group of teachers. In May, Courtis tests in arithmetic and tests in spelling were given for the purpose of continuing the work which has been carried on since 1914. In addition to these, tests in common fractions, dictation and geography, each organized by the department, were given to selected groups of about 1,000 pupils. For keeping the records, a new card to be known as the "record of standard tests," has been devised to take the place of the "record of arithmetic test" card. The new card is much more comprehensive, making it possible to keep a record of each pupil in tests in arithmetic, English, spelling and other branches of curriculum in which tests may be given from time to time. One bulletin, "Practice Exercises in Common Fractions," has been published by the department during the year.

EVENING SCHOOLS.

The Evening School Department, as reorganized in 1917, includes the recently established Day School for Immigrants, the evening high schools and the evening elementary schools, all in charge of the Director of Evening Schools. The Continuation School, formerly in the Department of Evening and Continuation Schools, the evening classes of the Boston Trade School, and the extension classes of the Trade School for Girls, are now in charge of the respective principals of these schools.

The evening high schools are now commercial schools, with the exception of the Central Evening High School, which offers both commercial and academic courses. In keeping with the changed character of the evening high schools, the course of study has been revised, and specialized commercial courses have been introduced, offering to pupils intensive training for particular types of commercial work.

War conditions and the prevalence of the influenza this year have been largely responsible for the decrease in enrollment in the evening schools. There is some satisfaction, however, in the knowledge that the average attendance has been considerably higher in comparison with former years.

In the evening elementary schools, in addition to conditions due to war and to the epidemic, the lack of immigration has been an important factor in the gradually decreasing registration.

In the evening elementary schools, in addition to conditions due to war and to the epidemic, the lack of immigration has

been an important factor in the gradually decreasing registration. The evening elementary schools are, to all intents and purposes, practically schools for immigrants, and immigration has almost entirely ceased. Illiterate minors, for example, who are compelled by law to attend evening school, were enrolled in the evening elementary schools to the number of 5,000 in 1914-15. This year only 367 illiterate minors were enrolled, which means that disregarding those who have acquired sufficient English to pass the literacy test, the mere lapse of years will eliminate illiterate minors from consideration until immigration is renewed. An illiterate minor who was sixteen years of age in 1914-15, when immigration practically ceased, will become twenty-one years of age next year.

While adult immigrants, whose attendance is wholly voluntary, have attended the evening elementary schools in relatively greater numbers than formerly, it has been found necessary from time to time to close certain of our evening schools. In 1914-15 there were 21 evening elementary schools, not including branches. This year there are 12 evening elementary schools, and it is probable that next year a further consolidation will be found desirable in anticipation of a further decrease in enrollment. Ample provision, however, has been made and will continue to be made for the residents of every section of the city.

In view of the vast number of adult immigrants in the country and the small number who make the necessary sacrifice to attend evening school, it must be confessed that the results accomplished are far from satisfactory. Evening school officials and teachers are the first to acknowledge that these evening schools do not begin to reach a sufficiently large number of immigrants. This failure is in large part due to conditions over which the school has little control and is no reflection on the earnestness or the willingness or the devotion of evening school workers. The workers themselves realize the limitations and appreciate the necessity of a more comprehensive program of immigrant education.

The City of Boston has established a Day School for Immigrants which has been given authority to open classes for residents of Boston in any section of the city, in any suitable accommodations, school buildings, factories, stores or elsewhere, at any hour of the day or evening.

Several classes have been opened in some of our manufacturing establishments and others are in prospect. The school

system stands ready to supply a trained teacher, and to furnish books and supplies wherever any employer will provide a suitable space for a classroom, and assure the attendance of fifteen persons.

Boston has been conducting in rented quarters some of these classes since 1911, and the pupils have been largely hotel employees, and others whose hours of employment precluded their attendance at evening school. Classes for mothers have been conducted in school buildings since 1915 and answer a very pressing need. The immigrant boy is compelled to attend day school and the immigrant men attend evening schools under the stress of the necessity for learning English, while the mother remains at home to care for her family and to attend to her household duties. As a consequence, her husband and her children soon outstrip her in their knowledge of the English language and of American ways and customs. No facilities had existed previous to this time for enabling mothers to keep abreast of their children, and the consequent handicap made itself felt both in school life and in home life. The children, with the superior knowledge of English, have taken advantage of their mothers, and the mothers have been unable to do their full share in the training of our future citizens, for the home, of course, must contribute the most to such training. The family life itself was threatened by the pseudo-Americanization of the children, for the children felt themselves superior to their parents and especially to their mothers, and the schools were blamed for fostering contempt for parental control and were accused of menacing the family life.

The purpose of these mothers' classes is to enable mothers to keep abreast of the progress of their children and to afford an opportunity for them to learn English at the only time at which they can be spared from their home duties. The classes are held during the hours when the day schools are in session and when the children of school age are in school. Volunteer kindergartners care for the younger children in a room provided for this purpose, and thus the mothers are relieved of home duties and are enabled to get away for their instruction in the afternoon. The mothers have been most enthusiastic and rarely miss a day from the classes, and the experiment has proved an unqualified success.

The teachers in the Day School for Immigrants have just completed a course in the special technique of teaching English

to immigrants given by two of the most experienced teachers who have been assigned by the Superintendent to assist the Director of Evening Schools in the organization and supervision of these classes. Most of the teachers have completed the course given by the State Board of Education and other courses, and many of them have had years of experience in classes for non-English speaking pupils.

The Day School for Immigrants has had this year an enrollment of 937, and approximately 40 classes have been in operation, including classes at the Charlestown State Prison recently undertaken at the request of the Bureau of Prisons.

Despite the handicaps resulting from lack of suitable permanent accommodations and from the lack of a corps of permanent teachers, it is becoming more and more evident that the Day School for Immigrants with its flexible scheme of administration will gradually become the parent organization for teaching English to non-English speaking immigrants.

PENMANSHIP.

At the beginning of the school year 1918-19, the School Committee, at the request of the Superintendent, appointed a Director of Penmanship, to devote herself primarily to the development of the proper methods of penmanship instruction in the first three grades. Hitherto there had been no particular insistence upon movement writing in accordance with the Palmer method in the primary grades. Assistant Superintendent Rafter, whose report contains a full and interesting account of the year's progress in penmanship, has long believed that children entering the fourth grade were obliged to unlearn many bad habits of penmanship acquired in the early grades. The appointment of the Director of Penmanship was an effort to determine whether under proper supervision children could be made to adopt proper methods in penmanship from the very beginning of the school career.

It is my belief that the results obtained in penmanship during the past year, under the Director of Penmanship, amply justified the experiment; that teachers who in the beginning were doubtful that little children could be made to use proper methods at the beginning, are now convinced of the superiority of the present plan. There is found in the public mind perennially a suspicion that with the development of new educational methods and ideals, the old fashioned arts, commonly

known as the "three r's," are being neglected. This, however, is far from being the case. The so-called fundamental subjects in the elementary school are being studied with great attention, and a consistent effort is continually made to see that the teaching of the fundamental subjects in our elementary school, far from being neglected, are being improved year by year.

THE PROBLEM OF SUPERVISION.

From various school surveys appearing during the current school year it is apparent that Boston has not employed the number of supervisors, both general and special, that are found in many other communities. The Finance Commission report upon the schools in 1916 made the criticism that our primary grades needed more supervision. In my judgment the problem of proper supervision of schools has not been solved in any community in this country. Survey reports in the past year indicate that certain communities in the attempt to get effective supervision have, in certain instances, secured too much. In a comprehensive account of the Gary school system, made by the General Education Board, the interesting fact is brought out that the number of supervisors in the city was so great that the principal of the school had become merely an executive, without educational authority and influence. Besides the usual supervisors of special subjects such as music, drawing and manual arts, there are supervisors of English, arithmetic, geography, history, and similar subjects. The principal of the school in Gary occupies the position somewhat similar to that of business manager, and the teachers do not look to him for general educational direction and supervision. One great difficulty of supervision is the tendency on the part of the supervisor to see her subject out of proportion to other subjects, and to make excessive demands upon the pupils' time for the particular subject supervised. The Gary report recommends in effect that the number of supervisors in the Gary schools be reduced, and that the principal of the school be given authority and responsibility for educational standards and policies.

In Boston the plan of supervision is different. To the principal of the school is delegated general educational guidance and responsibility. He is provided with a course of study which emanates from the Board of Superintendents, and it is his duty to see that the provisions of the course of study are carried out. These courses of study, however, are made up

upon the most coöperative basis possible, viz., as a result of conferences, deliberations on the part of heads of departments and teachers, but the principal of the school, subject to the advice of the superintendent and assistant superintendent, is the interpreter of the course of study. Boston has special supervisors for special subjects, such as music, manual arts and gymnastics. We have not, however, supervisors for such branches as English, arithmetic, geography and the like, and ought not at this time to seek supervisors for these branches.

There is serious doubt as to whether or not we should have a special supervisor for primary instruction. At the present time Assistant Superintendent Mellyn is in charge of this responsibility, and devotes much time and attention to this important problem. Our assistant superintendents, however, are so fully employed with important executive problems that it is difficult for any of them to assume the responsibility of intimate personal supervision. During the coming year it is planned to institute a number of conferences with first assistants in charge, who are the local executives of our primary buildings, to discuss the whole problem of supervision, and to propose a plan of better supervision should one be found. In my judgment we have made no mistake in not hastening the movement for more supervision in our school system. It is better to adopt our own plan, after sufficient reflection, than to imitate the procedure of other cities purely as the result of educational fashion.

In my judgment the process of providing more supervision for the primary grades could be better effected by appointment of a director of supervisory grade than by appointing an additional member to the Board of Superintendents. No member of the Board of Superintendents can avoid devoting considerable attention to various functions, such as that of serving on a board of examiners, serving on a board of apportionment, participating in frequent councils in which important administrative policies are settled. At present we have five members of the Board of Superintendents, with heavy duties it is true. Each assistant superintendent is assigned the general supervision of approximately 24,000 children and 500 teachers. An additional assistant superintendent — and there is one additional who may be employed under the provisions of the law — would not materially lighten the present burden of assignments, and if such a member were assigned the problem

of primary supervision he could not perform this function and at the same time be an effective member of the Board of Superintendents. In my judgment the more practical way to bring alleviation to the present heavy assignments of the members of the Board of Superintendents would be the appointment of a chief examiner. Such chief examiner should be the ablest individual that could be found in our own corps or elsewhere, should of course possess the necessary scholarship and experience, and in general, subject to the Board of Superintendents, should assist in the preparation and correction of examination papers. Such an examiner could also be of substantial assistance to members of the Board of Superintendents by reading and grading papers presented as the result of promotional requirements.

In summary: I would state that as far as I can analyze the problem of supervision in the Boston Schools, I am of the opinion that the present number of assistant superintendents is defensible both from the viewpoint of financial economy and educational efficiency; that there is growing need for more primary supervision, and that the exact plan to be adopted should be postponed until further study can be made of the real needs of the situation. Furthermore, if additional supervision for primary grades is determined upon, the position should be of the rank of supervisor or director rather than of any higher grade, so that the individual selected could devote exclusive time to the pursuit of the problem of stronger work in our primary grades. Finally, I believe that assistance should be given to the Board of Superintendents by the appointment on a merit basis of a competent chief examiner who, subject to the directions of the Board of Superintendents, shall perform the functions indicated above.

Respectfully submitted,
FRANK V. THOMPSON,
Superintendent of Public Schools.

APPENDIXES TO REPORT OF
SUPERINTENDENT FRANK V. THOMPSON.

APPENDIX A.

REPORT OF ASSISTANT SUPERINTENDENT
JEREMIAH E. BURKE.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

MY DEAR MR. THOMPSON,— In response to your request I herewith submit a report relating to certain activities of the Board of Superintendents.

THE DUTIES OF THE BOARD OF SUPERINTENDENTS.

In the Twenty-eighth Annual Report of the Superintendent of Schools (1907-08), Stratton D. Brooks discussed somewhat in detail the work of the Board of Superintendents.

Doctor Brooks had been a member of the Board of Superintendents prior to his promotion to the superintendency, and consequently was thoroughly acquainted with the duties and responsibilities of his former associates, both in their individual capacities and in their collective organization as a Board.

On pages 69-72 of his report, he summarizes the activities of the Board of Superintendents as follows:

So many inquiries are made as to the duties of the assistant superintendents that it seems well to indicate the lines of major activity of these officials.

As individuals the assistant superintendents are the direct representatives of the superintendent in the districts to which they are assigned, and may exercise any of his authority delegated to them by him. In addition, they have many specific executive duties assigned to them by the regulations, such as establishing district lines for primary schools, transferring pupils from district to district, adjusting cases of discipline, etc. In addition to these duties definitely mentioned there are the innumerable occasions of conference and advice with principals and teachers with reference to gradations, seating, promotion, organization, methods of instruction, interpretation of the course of study. There is also the very important duty of recommending teachers for appointment, subject to the restrictions of the merit list, and of securing the ones best adapted to the particular schools. A single case of suspension or of failure to graduate often takes hours of time. When it is considered that there are

nearly five hundred teachers for each assistant superintendent it is evident that the total amount of time devoted to the consideration and decision of questions of supervision or administration must be very great.

As members of the Board of Superintendents the assistant superintendents have a variety of important duties. It is impossible to bring these under any complete or inclusive classification, but the major headings are as follows:

1. Examinations of candidates for teachers' certificates.
2. Making of the merit list and the annual re-rating of the graduates of the Normal School.
3. Examination of text, supplementary and reference books, maps, globes, charts, etc., and the selection of desirable ones for adoption on the authorized list.
4. Making and revising courses of study for all the schools.
5. Providing plans for and conducting the promotional examinations.
6. Meeting with various committees concerned with educational projects, for example, the Committee on Betterment.
7. Conducting various educational experiments.
8. Reporting to the Superintendent or to the School Committee with reference to the desirability of proposed lines of action, methods of administration or other related matters.
9. Granting diplomas and deciding cases of appeal.
10. Conducting admission examinations to the Normal School.
11. Initiation of plans for the improvement of the schools.
12. Attending teachers' associations, visiting outside schools, and in other ways keeping in touch with the progress of education.

These headings do not at all indicate the amount of work involved. The certificate examinations in 1908 were attended by nearly four hundred candidates, each writing several papers of considerable length. The preparation of the many different question papers and the careful scrutiny of the examination papers handed in by the candidates takes days of time. After this, there are many additional days devoted to considering questions of eligibility, the relative merits of the candidates as indicated by the length, character and quality of their experience, and their final rating on the merit list.

The re-rating of the graduates of the Normal School on the merit list is a task that must be done deliberately and accurately. The painstaking and careful scrutiny of records and the inspection and comparison of credentials and records require long and laborious days. The same may be said of the work of considering text-books, courses of study, granting of diplomas, admissions to the Normal School and the other activities of the Board of Superintendents.

The nature of the work is such that it cannot be hastily done. Such problems as the reorganization of the Martin School, the establishing of a supervisor of practice, the organization of the Department of School Hygiene, the course of study for the High School of Commerce, need to be considered with wisdom and sound judgment. To consider such experiments as the afternoon classes in games and play, the industrial work in the Agassiz and Hancock Schools and the writing experiment in East Boston requires time for investigation and thoughtful meditation.

Add to all this a hundred less important but none the less time-consuming duties, and it is evident that the work of an assistant superintendent is one demanding high talent and broad experience coupled with tact, discretion, decision and an unlimited capacity for work.

The functions of the Board of Superintendents have not materially changed; in all essential respects they remain the same as those described by our former superintendent eleven years ago. It is true that at times more stress has been placed upon certain lines of activities and less emphasis upon others, according to the points of view of different School Committees, but in the main the scope of work has been consistent in character with that outlined by Doctor Brooks.

Shortly after the inauguration of the present Superintendent, who had likewise been an assistant superintendent of the Boston schools, it seemed to the Board of Superintendents an opportune time to restate the major activities with which it is concerned, incidentally as a matter of record, but primarily in order to satisfy honest inquiries that arise from time to time similar in nature to those addressed to Superintendent Brooks.

Accordingly the Board prepared a brief résumé of its relations to the schools, to school authorities and to the public generally, and transmitted this definition of duties in the form of a statement to the School Committee, the Superintendent of schools kindly serving as the instrument of communication.

Although an analysis of this summary reveals many points of resemblance to that originally published by Doctor Brooks, nevertheless the Board of Superintendents feels justified in presenting the following outline in its entirety, for the information of school folk and all others who may be interested in the problems of organization and supervision:

SUMMARY OF DUTIES OF THE BOARD OF SUPERINTENDENTS AND OF ITS MEMBERS AS ASSISTANT SUPERINTENDENTS.

I. THE BOARD OF SUPERINTENDENTS.

A. *As a Board of Examiners.*

1. Examination of all candidates for permanent positions as nurses, teachers, supervisors and directors:

- (a) Determination of eligibility of candidates for all grades of service.
- (b) Preparation of papers for examination.
- (c) Editing and printing of the same.
- (d) Conduct of the various examinations.

- (e) Inspection of the class room work of all candidates who are likely to be certificated.
 - (f) Demonstration lessons for candidates for certain certificates such as kindergarten, household science, physical training, manual arts and special classes.
 - (g) Clinics for candidates for the nurse's certificate.
 - (h) Certification of all successful candidates, after careful consideration of their qualifications.
 - (i) Rating of all successful candidates, in accordance with all available data.
 - (j) Preparation of eligible lists of candidates for permanent appointment.
 - (k) Granting of certificates and licenses for temporary service.
2. Examination of pupils for admission to Normal, high and Latin schools:
- (a) Preparation, editing and printing of papers.
 - (b) Conduct of the examinations, and by the results, determining admission or rejection of candidates.
3. Promotional examination of teachers within the service:
- (a) Preparation for the examination and conduct of the same.
 - (b) Organization of promotional courses under school control.
 - (c) Supervision of such courses.
 - (d) Approval of courses not directly under school control.
 - (e) Assignment of credit for work accomplished.
4. Rerating annually of all graduates of the Normal School not permanently appointed.
5. Oral examination of all candidates for the position of supervisor or of director. (An extension of these oral examinations to include other groups of candidates is contemplated.)
6. Reconsideration of the Board's action concerning the results of any examination, or of any rating, whenever a candidate so requests.

B. As an Administrative Board.

1. Text-books.—The Board of Superintendents gives careful consideration to reports from the various Councils on Text-books, and approves all text, supplementary and reference books and all educational material authorized for use in Normal, high, Latin, intermediate and elementary schools. (The duties of the Board in regard to adoption of texts are by no means perfunctory. Texts are reviewed most critically, and often rejected because the material is unsuitable.)

2. Courses of Study.—The Board of Superintendents gives careful consideration to the content of new courses of study, and to modifications of existing courses; and if the proposed changes are considered advisable, recommendations are made to this effect by the Board.

3. Approval of Reports.—The Board of Superintendents gives careful consideration to reports on the organization and administration of schools presented by such bodies as the High School Head Masters' Association, the Elementary School Principals' Association, Councils on Intermediate Schools, etc.

4. Superintendent's Problems.—The Board of Superintendents freely discusses with the superintendent such administrative problems as he may present for their deliberation.

5. Assistant Superintendents' Problems.—The Board of Superintendents discusses formally, or informally, as the case may be, reports submitted to the Board by individual assistant superintendents relating to the subjects especially assigned to them by the superintendent, or to departments which are under their supervision.

6. Conferences.—The Board holds frequent conferences with the business agent, supervisors, directors, principals and all others who have matters of educational importance to present.

II. SECTIONAL MEETINGS OF PRINCIPALS.

The superintendent designates a member of the Board of Superintendents to attend the regular monthly meetings of each of the principals' associations, and to preside at these meetings. These associations include the High School Head Masters' Association, the Intermediate School Principals' Association and the Elementary School Principals' Association.

III. THE BOARD OF APPORTIONMENT.

The Board of Superintendents has representation upon the Board of Apportionment, which holds frequent meetings and considers among other subjects:

1. The expenditure of money for requisitions that fall outside of the per capita allowance, such as pianos and supplies and books for unforeseen exigencies.

2. The establishment of policies concerning the purchase of certain educational materials, such as films, slides, records, etc.

3. The apportionment of educational funds, such as the Gibson, the Bowdoin, the Degrand.

4. The transfer of a portion of a surplus from one item to meet a deficit in another.

In the future, the preparation of the School Budget will be included in the duties of the Board of Apportionment.

IV. THE ASSISTANT SUPERINTENDENT IN RELATION TO

A. *The School Committee.*

1. Investigation and report informally upon questions of discipline referred to the assistant superintendent by members of the School Committee.

2. Conferences with the School Committee, whenever so requested, concerning educational problems assigned to the assistant superintendent or concerning subjects with which he is especially familiar.

B. *The Superintendent of Schools.*

1. The relation of the Superintendent and the assistant superintendent is one of utmost professional intimacy. The assistant superintendent is the official representative of the Superintendent. It is essential, therefore, that the assistant superintendent apprehend the administrative problems

of the Superintendent and reflect them. This reciprocal attitude necessitates very frequent conferences, the interchange of confidences, and harmony of procedure and action.

2. The Superintendent assigns to each assistant superintendent certain schools and districts, likewise particular subjects and departments of work for the especial supervision of the assistant. (These various assignments are published in the Manual of the Public Schools.)

3. The assistant superintendent from time to time, on his own initiative, makes reports and recommendations to the Superintendent, either orally or in writing, concerning the districts, subjects and departments assigned to him. On the other hand, he frequently submits such reports and recommendations at the request of the Superintendent.

C. Principals of Schools and Districts.

The assistant superintendent is in frequent communication with principals concerning problems of organization and administration; concerning promotions and transfers of teachers; concerning interpretation of courses of study; concerning promotion, transfer and discipline of pupils; and concerning various other school interests.

D. Directors and Supervisors.

1. The assistant superintendent holds frequent conferences with the supervisors and the directors of the departments especially assigned to him by the Superintendent.

2. Some of the assistant superintendents, in addition to their other duties, continue to exercise administrative supervision of the departments of which they were the heads prior to their promotion to membership upon the Board of Superintendents.

E. Teachers.

1. The assistant superintendent inspects the class room work of all teachers in his schools and districts.

(a) Primarily to offer helpful suggestions, and

(b) Incidentally to give service ratings.

2. The assistant superintendent holds conferences, sometimes with large groups and again with smaller groups of teachers, for such instruction as he may find necessary.

3. The assistant superintendent organizes various councils of teachers for special work, meets frequently with them and directs their efforts.

4. The assistant superintendent serves with teachers upon committees in formulating courses of study, sometimes on his own initiative and again when directed by the Superintendent.

5. The assistant superintendent advises teachers with reference to requirements for promotional examinations.

The assistant superintendent is always ready to make suggestions to teachers concerning their own professional growth and their opportunities for promotion.

F. Parents.

The assistant superintendent has frequent interviews with parents with reference to the transfer, the discipline and the promotion or non-promotion of pupils. Whenever the parent suspects that injustice has been done his

boy or girl, the assistant superintendent proceeds to make a most careful investigation of all the circumstances in the case, and in the capacity of an impartial judge to render a dispassionate decision. (Rarely is an appeal made from the decision of the assistant superintendent to the higher officials.)

G. Pupils.

It goes without saying that all the various duties enumerated above are performed with the single objective,—that in the education of all our children the highest possible standards of excellence may be fostered and maintained.

It is of interest to record that the Rules and Regulations that have been carefully revised during the past year and adopted by the School Committee, give formal recognition to the salient features enumerated in the above report.

THE BOARD OF SUPERINTENDENTS AS A BODY FOR THE EXAMINATION, CERTIFICATION AND RATING OF TEACHERS.

In the annual report of the Superintendent of schools for 1917 there was published a rather comprehensive description of the work of the Board of Superintendents as a body for the examination, certification and rating of teachers. The activities described in that report the Board still continues to perform.

During the past year, however, the Board of Superintendents has extended its province as an examining body to include a new field of service, significant and far-reaching in importance.

At the suggestion of the Superintendent of schools the Board assumed the delicate task of appraising the quantity, quality and character of experience of all holders of the elementary master's certificate; of establishing a rating for all such qualified candidates based upon a maximum of 1,000 points, and of arranging their names upon eligible lists from which promotions to elementary school principalships are to be made in the order of merit by the Superintendent of schools.

In preparation for this work of appraisal the Board arranged a detailed plan of procedure. In accordance with this plan all the concrete objective evidence on file at the administration headquarters is made the basis for the ratings of candidates. Definite numerical credit is given candidates (a) for educational preparation and experience (100 points), (b) for administrative, supervisory and executive work (200 points), (c) for professional interest and growth (200 points), and preponderating weight — 500 points out of 1,000 — is given for actual class room experience.

All data concerning the candidates recorded under each of the above-named items were submitted to the Board of Superintendents as a body, were judicially examined and evaluated, and the number of points awarded a candidate in each instance represented the combined judgment of the individual members of the Board.

The seriousness with which the Board accepted its responsibility and the careful attention which it gave to all the evidence collected from various sources are indicated by the fact that the Board was occupied exclusively during eleven morning sessions, comprising in the aggregate about forty hours of time, in determining the ratings of the eighty-three candidates whose names were before it for consideration.

Finally, on June 2, 1919, when the ratings were completed, two lists — one containing the names of the men, another the names of the women — were transmitted to the School Committee for approval by that body.

These lists thereupon became the officially recognized groups from which the Superintendent is required to make appointments of elementary school principals as vacancies occur. By order of the School Committee, the Superintendent shall present to the committee for confirmation one of the three names standing highest upon the list, in conformity with civil service practices.

The lists as originally established shall remain intact for two years. At the expiration of that time (June, 1921), and biennially thereafter, a complete revision of the lists shall be made by the Board of Superintendents.

The following extract from the minutes of the School Committee of January 6, 1919, gives in epitome the plan proposed by the Board of Superintendents, and in accordance with which promotions now are made to the rank of principal in the elementary school districts of Boston:

A communication was received from the Board of Superintendents under date of January 6, 1919, submitting a plan for the rating of candidates for promotion to the rank of principal of an elementary school district, substantially as follows:

1. The Board of Superintendents shall establish a rated list of all candidates eligible for appointment to a principalship of an elementary district. At their own request, candidates may not be so rated.
2. The Board of Superintendents shall prepare two separate lists, one for men and another for women.

3. These rated lists shall be the result of the evaluation of the concrete and objective evidence that may be secured from all available sources.

4. The ratings shall be upon a scale, with 1,000 points as a maximum, these points to be distributed as follows:

a. Educational preparation for teaching, experience in teaching	100 points.
(The basis of this inquiry shall be Form 264, revised by the Board of Superintendents to suit this special purpose.)	
b. Administrative, supervisory and executive work . . .	200 points.
(The basis of this inquiry shall be Form 265, revised by the Board of Superintendents.)	
c. Professional interest and growth	200 points.
(The basis of this inquiry shall be Form 266, revised by the Board of Superintendents.)	
d. Class room teaching	500 points.
(The basis of this inquiry shall be Form 267, revised by the Board of Superintendents.)	
Total	<u>1,000</u> points.

The present practice of having the class room teaching of candidates evaluated by the master of the school, by the assistant superintendent in charge and by another assistant superintendent designated by the Superintendent is to be retained.

5. *First Rating.*— When the lists are made for the first time the Board of Superintendents shall evaluate the work of all persons who are eligible for appointment to the position of principal, except individual candidates who request of the Board of Superintendents that they be not so rated. The names of those who secure a high rating (the standard thereof to be determined later *) shall be published in the same manner as are other authorized eligible lists.

6. The names of candidates securing a rating below the fixed standard shall not be published, but their rating shall be accessible to the individuals so rated and to the officers of the School Committee.

7. *Subsequent Ratings.*— The group of persons whose names appear upon the published eligible lists shall be rerated biennially. All other candidates shall be rerated at the same time, but only at their request, and the names of those so rated shall appear in the lists when next published.

8. The names of candidates who by examination secure the certificate of qualification VI., Elementary School Master, subsequent to May 1, 1919, shall not thereupon be merged in the rated lists, but shall appear in the lists published immediately subsequent to their examination and certification.

9. Seniority of appointment shall be given favorable consideration by the Board of Superintendents in the evaluation of work, provided that the service performed has been continuously progressive and efficient, as evidenced in Forms 264, 265 and 266.

* The standard finally agreed upon was 725 or better.

10. The names of candidates shall be arranged upon the lists in the order of merit as determined by the numerical ratings, *i. e.*, the name of the person securing the highest rating shall appear first, the name of the person securing the next highest shall appear second, and so on down the list.

It is proposed that in making appointments from these lists, selection shall be made by the Superintendent from any one of the three names that stand highest on the list, in accordance with universal civil service practice.

The Board of Superintendents is strongly of the opinion that it is educationally and administratively inadvisable to limit appointment to the single individual whose name appears first upon the list.

11. If these recommendations receive the approval of the School Committee, the Board of Superintendents purposes so to organize its work as to have the original merit list ready for presentation to the School Committee not later than June 1, 1919. Subsequent lists shall be prepared and similarly be presented every second year thereafter.

The communication was placed on file, the plan approved as presented, and it was

Ordered, That the Board of Superintendents is hereby authorized to proceed at once to put into effect the plan submitted by it at this meeting for the rating of candidates for promotion to the rank of master of an elementary school district, with a view to presenting the first rated list of candidates eligible for such promotion before the close of June, 1919.

Respectfully submitted,

JEREMIAH E. BURKE,
Assistant Superintendent.

APPENDIX B.

REPORT OF ASSISTANT SUPERINTENDENT
AUGUSTINE L. RAFTER.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

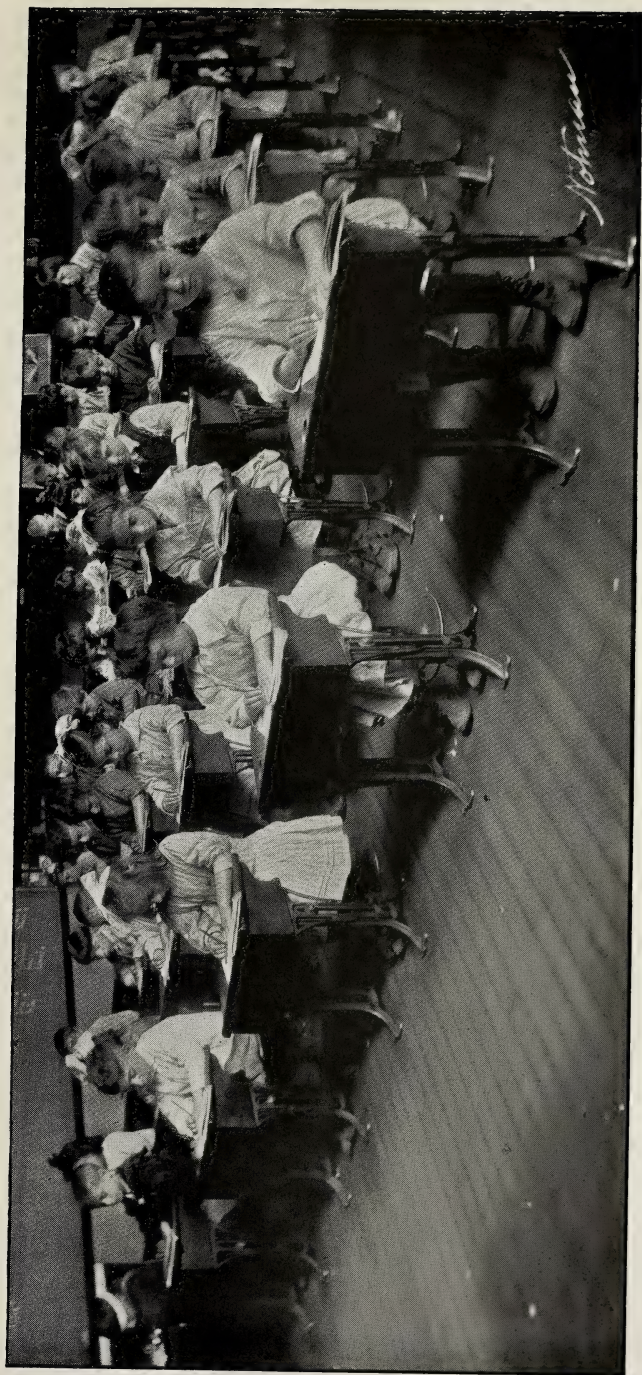
DEAR SIR,— I herewith respectfully submit a brief report on a few of the activities that have come under my supervision during the past year.

PENMANSHIP.

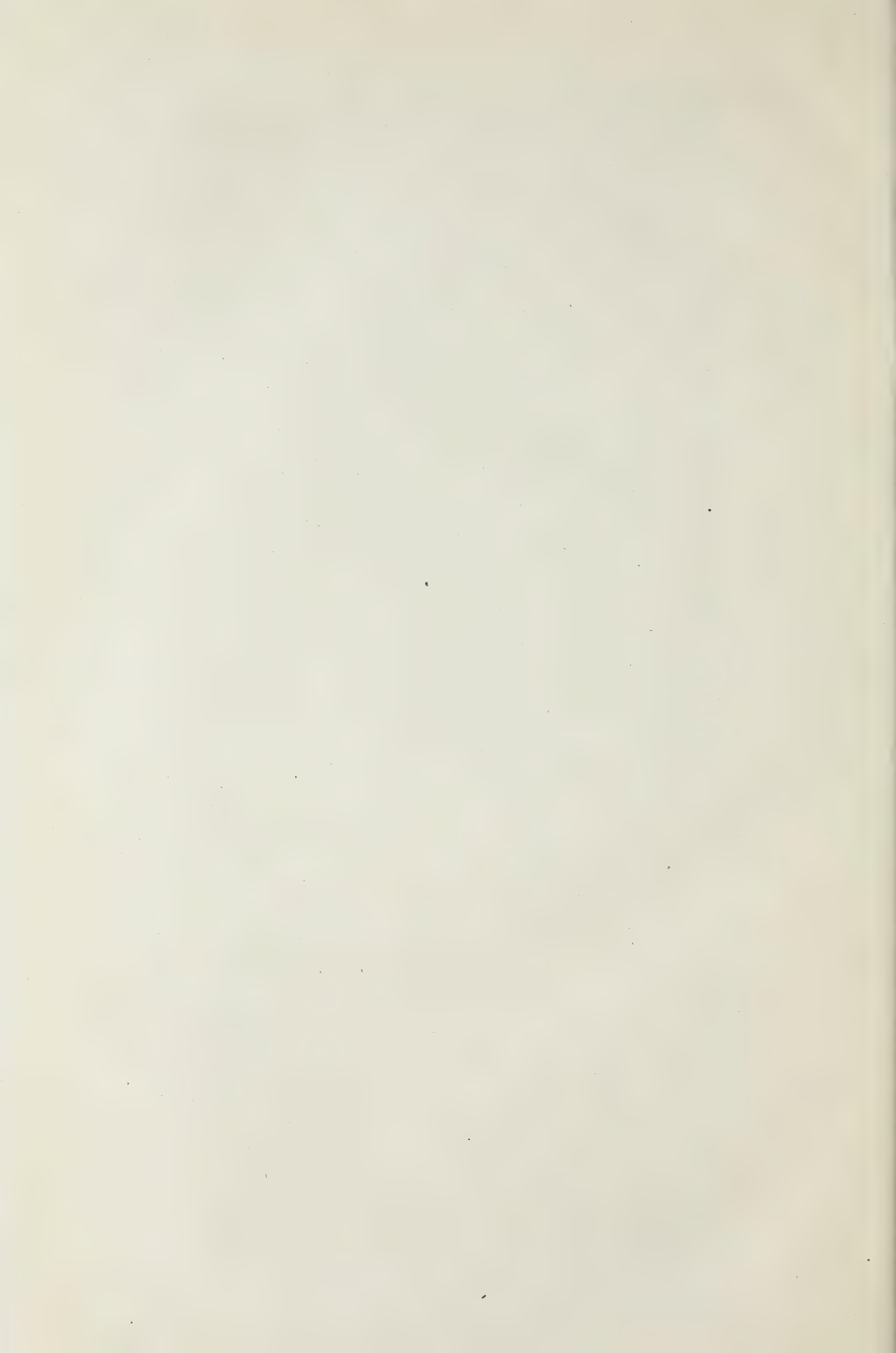
The muscular movement forearm system of penmanship has been in use in most of the grades for years. When I was given supervision of the subject I advocated the exclusive use of this system throughout the grades from the first to the twelfth. I believe, and hold, that it was illogical and unpedagogical to defer the introduction of the system until the fourth grade. Begin in the first grade and carry through was my contention. I found many masters and teachers in disagreement with me. The then Superintendent decided, and of course I accepted and enforced his decision, that the teachers in the first three grades be given their choice as to whether or not they would employ the muscular system. They were, however, to use only the approved style of small and capital letters.

One of my first discussions with the present Superintendent had reference to the introduction of the muscular system into the first three grades. I pointed out to him that I had strongly recommended such introduction in my last report. I was delighted to be assured that he agreed with me. I was enheartened when the School Committee authorized the exclusive use of the muscular system throughout all the grades.

In a previous report I pointed out the noteworthy fact that the grade teachers and the teachers of commercial branches in the high schools had, to the number of over 2,200, qualified themselves to teach the muscular system. That was a gratifying and reassuring achievement. I felt that the next step was



GRADE I.—WRITING LESSON.—CHRISTOPHER COLUMBUS SCHOOL, ELIOT DISTRICT.



the appointment of a director of penmanship. Fortunately for the teachers and pupils, the Superintendent and the School Committee accepted my recommendation and a thoroughly competent teacher and inspiring director of penmanship was found.

The work of the director of penmanship was begun in September, 1918. During the months of September and October each school district in the city was visited by the director for the purpose of making a general survey of the work. Upon completion of these visits a detailed report, including recommendations, was made to the assistant superintendent in charge.

The most outstanding feature was the need of beginning intensive work at once in the primary grades. The two most serious problems concerned with this work were: First, the doubting, not to say antagonistic, attitudes of the teachers toward the establishing of muscular movement forearm writing in the primary grades, and second, their lack of knowledge of the pedagogical procedure in it. A great majority of the teachers were convinced that muscular movement writing was impossible of accomplishment in the primary grades, and were averse to attempting it.

Late in October three meetings of the teachers of Grades I, II and III, respectively, were held in the Everett School auditorium. Special class teachers attended the meeting of the teachers of Grade III. At these meetings the director set forth the basic principles, pedagogical and psychological, for the establishing of muscular movement writing in the primary grades, explained the scope of the work, gave instruction in the beginning steps of the class room presentation of the subject, urged the teachers to assume open mental attitudes and assured them of successful results.

During November, December and January the director gave demonstration lessons with pupils in the class rooms of the primary buildings in each of the sixty-eight school districts of the city with the teachers observing. The object of these lessons was to show the actual class room procedure with the children in the first stage of the development of this work, *i. e.*, the teaching of correct posture, the use of materials and movement drill exercises, to discuss the work with the teachers, and to answer their questions.

In February a meeting of teachers of Grades I and II, and a meeting of teachers of Grade III and special classes were held

in the Abraham Lincoln School Auditorium. At these meetings the director defined what should be the accomplishment of these grades at that time, and explained the procedure of the second stage of the development of the subject, *i. e.*, the transition from movement drill to movement writing, and the study of letter formation.

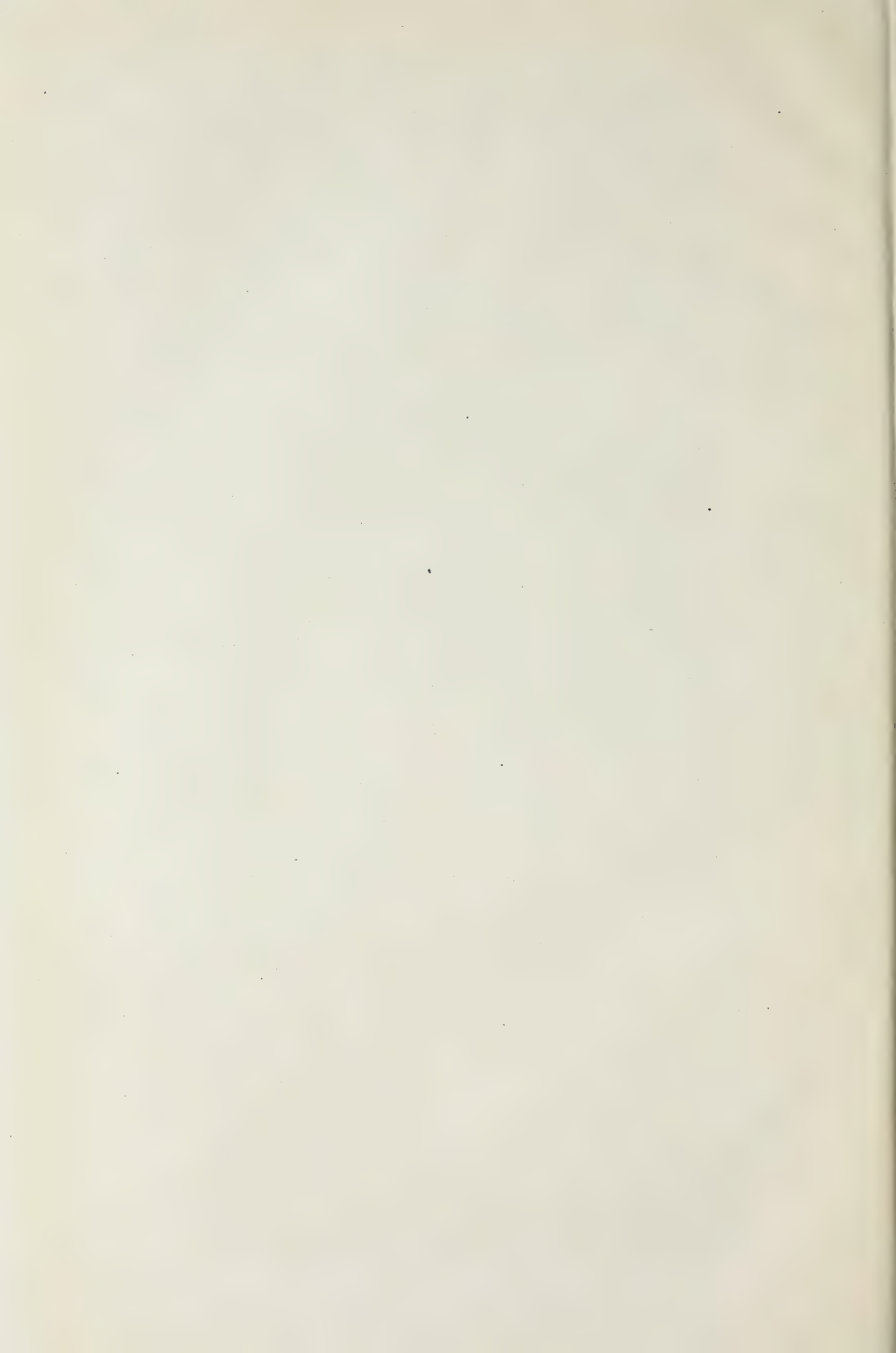
During February, March and April the director gave a second series of demonstration lessons with the pupils in the class rooms of the primary buildings in each of the sixty-eight districts of the city with the teachers observing. The object of these lessons was to show the procedure with the pupils in making the transition from movement drill to movement writing, involving the development of preliminary motion, letter formation, counting and the evaluation of the writing product, to discuss the work with the teachers and to answer their questions.

Early in May a meeting of the teachers of Grades I and II and a meeting of teachers of Grade III and special classes were held in the Abraham Lincoln School auditorium. At these meetings the director defined what should be the accomplishment of these grades at that time, and explained the functional importance of correct counting, including rhythm, speed, and caliber of voice of the teacher. After explaining at a black-board the presentation of each letter, word and figure drill in the text-book, the director conducted an oral concert drill with the teachers in rhythmic, rapid counting and spelling of all work to be presented in the primary grades.

During May and June the director visited 519 primary class rooms and observed the teacher of each while she gave a penmanship lesson to her class. The average time spent in each class room was five minutes. As the teachers were notified in advance of the date of the director's visits, and also informed of the type of lesson to be given, everything was in readiness when the director appeared in the class room and the work of visiting thereby expedited. Within this period of five minutes each teacher carried her pupils through the movement drill exercises and the writing of letters and words. During this performance the teacher's ability to direct her class, her poise, method of procedure, the speed and rhythm of her counting and her power of correction were all quickly and clearly evidenced, and the response of the class in assuming correct posture, penholding, paper placing and moving, performing



GRADE II.—WRITING LESSON.—SAMUEL G. HOWE SCHOOL, LAWRENCE DISTRICT.



the movement drill exercises, and making the transition to muscular-movement writing of letters and words were plainly seen. Thus it was easily possible, in the giving of a five-minute writing lesson, to discover if the teacher was teaching and if the pupils were learning, and also, if not, why not. During these visits suggestions and corrections were given by the director where needed. Fifty districts were covered in these visits and a thoroughly inclusive and detailed survey made thereby of the work of teachers and pupils in all parts of the city. On June 10 pupils of every primary grade wrote a penmanship lesson designated by the director, and the papers were sent to the office of the director. In the fall an exhibit of these papers will be held.

The first noticeable effect of the year's work is the complete change in the attitudes of the primary teachers. They are enthusiastically in favor of the teaching of muscular movement writing in primary grades; they have taken the instruction in it most whole-heartedly and capably; they have worked zealously and effectively with their classes and in most admirable coöperation with the director. Their part could not have been done better.

The second noticeable feature is the teaching equipment in this subject of the whole body of primary teachers of the city. Within a remarkably short space of time, but a single year, these teachers have acquired the ability to present penmanship instruction to their classes forcefully and effectively, and in a manner entirely in accordance with the laws of physiology and pedagogy. Their power is distinct and obvious.

The third noticeable feature is the effect upon the pupils. From the stooped, cramped postures of finger motion, slow writing, the children of the first three grades have changed to erect, heathful postures, conducive to free breathing and the conservation of eyesight, and now, with nice coördination of mind and muscle, they swing off into rapid, legible and enduring writing without strain, at the rate of about seventy letters per minute. The writing product is more or less erratic in control of letter formation, *which is as it should be*. It is one of the most important considerations of this work that both teachers and pupils of the primary grades have finally been convinced that *correctness of procedure* is to be obtained rather than *exactness in control of the writing product* in these grades.

The accompanying photographs and samples of pupils'

writing show clearly the appearance of the pupils as they perform the formal writing lesson and other written tasks, and also the appearance of the writing product. From a study of these photographs may be obtained some of the effects of actual visits to the class rooms. The first impression is that of the mental poise of these little children. It is distinctly obvious that they are conscious of their power to perform this task of dignity and skill. The love of doing is written on every face. Their perfect relaxation, demonstrated by the grace and ease of their postures, shows how well they are being habited by this training. The well poised heads, expanded chests, relaxed arms and fingers, straight but not stiffened backs, well placed feet, bespeak the physical culture phase of this work.

A glance diagonally across the desks will show the perfect alignment of penholding, paper holding and adjusting, and how well every pupil has mastered the fundamentals of good writing ability.

It should be noted that these photographs show pupils in widely separated districts of the city. The first grade pictures, for example, taken in the North End, of little tots who, upon entering the grade in September, could understand English only imperfectly, show how efficiently they have been trained. It is the object of these photographs to show how very general has been the excellent work done in all parts of the city.

The samples of writing are displayed to show something of the actual writing product. They were not selected as samples of the *best writing* obtainable in these grades but rather as an evidence of what may be expected of the *average* in these grades.

Specimen No. I, written by a first grade pupil, shows the movement drill exercises done with excellent control and correct slant. The writing is pure muscular movement as shown by the swift, clear-cut lines. It is an excellent specimen of first grade writing, done in good posture, with correct movement, at the rate of sixty letters per minute. The lack of control in the mastery of comparative heights of letters and in spacing will be gained by the child as she goes upward in the grades.

Specimen No. II, written by a second grade pupil, shows a sample of pure muscular movement writing with swift, clear-cut lines, an excellent specimen of second grade writing. It was done in good posture, with correct movement, at the rate of sixty-five letters per minute. This specimen shows more

SPECIMEN No. 1.

Bowdoin School, Miss Etta Rich, Teacher.

Ida Miskiritz, Age 6, Grade I.



o o o me

o o o me

SPECIMEN No. 2.

Benjamin Dean School, Miss L. G. Norris, Teacher.

Mary Doherty, Age 7, Grade II.

See me run
See me run
See me run

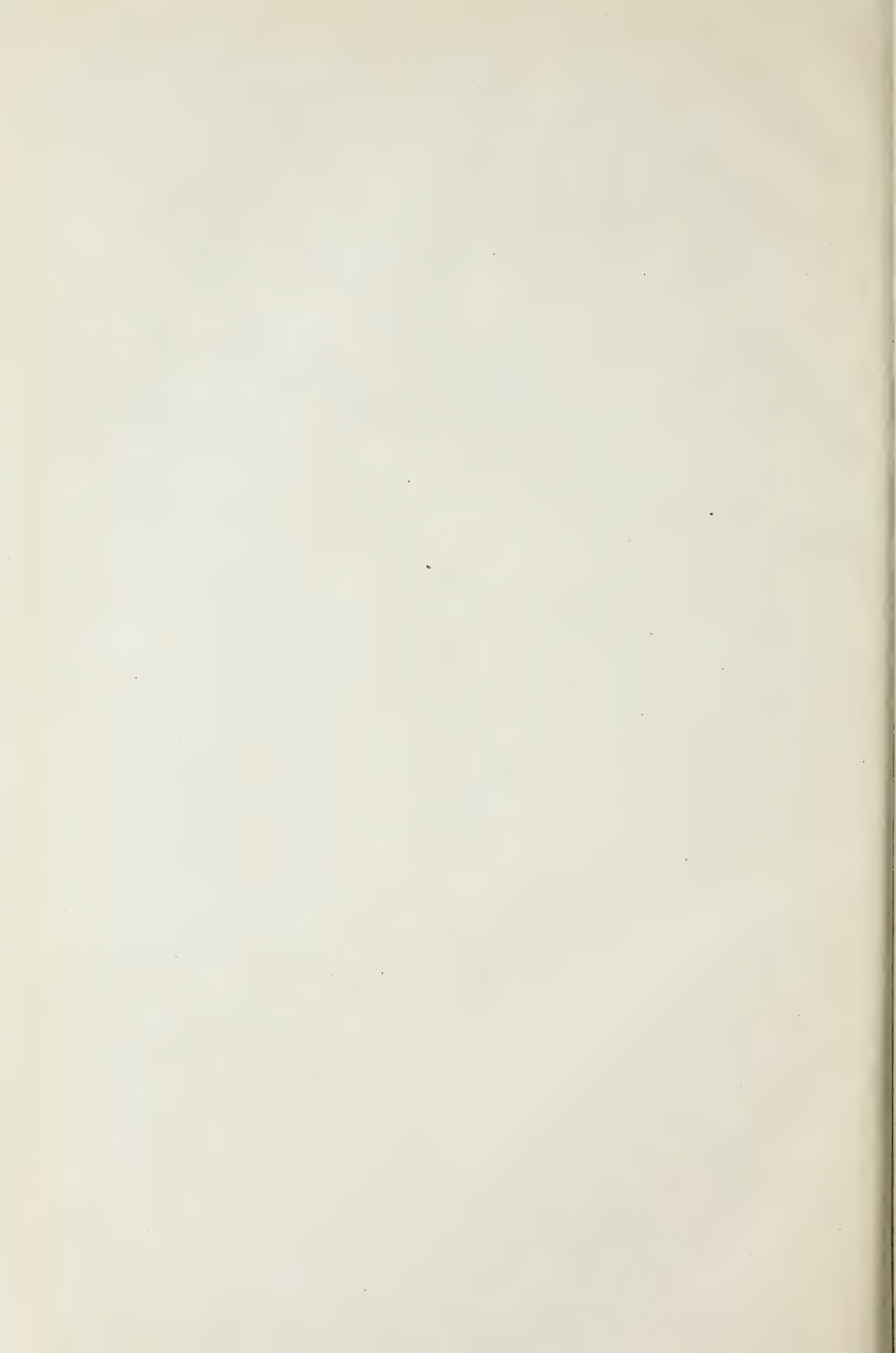
SPECIMEN No. 3.

Florence Nightingale School, Miss Alicia McDonald, Teacher.

James Dempsey, Age 9, Grade III.

o o o o o o o

Omen Omen Omen



control than that of Grade I, as should be expected. A finer control and better alignment will be gained in Grade III.

Specimen No. III, written by a third grade pupil, shows a sample of pure muscular movement writing, with swift, clear-cut lines, an approved specimen of third grade writing. It was done in good posture, with the correct movement, at the rate of about seventy letters per minute. A much finer control is shown than that in the first two specimens, as should be expected. A more uniform control of size, slant and spacing will appear in this pupil's work after another year of study and practice.

The delight of the primary pupils in the performance of this writing deserves mention. Everywhere throughout the city the teachers tell of the joy which the children find and express in this writing. A series of interesting, amusing and significant anecdotes relative to this work during the year could be related. Teachers have very generally remarked that, because of the pleasure and eagerness with which their pupils anticipate the writing lesson, they feel the penmanship period could never be deferred or delayed without perturbation on the part of their classes. This disposition of the pupils is a tribute to the teachers' splendid presentation of the work as well as to the fascination of the subject itself.

There is quoted here, as indicative of the present attitude of the teachers toward the subject, a letter to the assistant superintendent in charge:

For introducing arm movement writing into the primary grades, will you please accept the grateful thanks of a second grade teacher. Nearly three fourths of my children can write — not draw — anything in the "Letter Writing Lesson" with perfect arm movement, and the rest do pretty well. This result has been secured in less time and with infinitely less nervous strain for both teacher and pupil than ever before.

The effect of this well-instructed group of children as it moves upward to the higher grades will be that the drudgery of breaking up wrong writing habits will be removed, thus giving the teachers of those grades opportunity to further develop the work begun in the primaries, and subsequently to send the pupils to the higher grades adequately equipped with correct writing habits necessary to the best performance of the great amount of written work to be done in the upper grades and in the high schools.

The ideal coöperation of the elementary masters with the

director of penmanship has made the work of the year possible of development to its present high degree. They have facilitated arrangements for presenting this work to the teachers, encouraged the teachers during the various stages of development of the work, and, through their faith and appreciation, have made achievement a desire and a delight on the part of every one concerned.

Two standard sizes of paper, 6 inches by 8 inches and 8 inches by 10 inches, with uniform ruling, have been established for use in all grades. Many sizes of paper with varied rulings were found to be detrimental to the formation of correct writing habits.

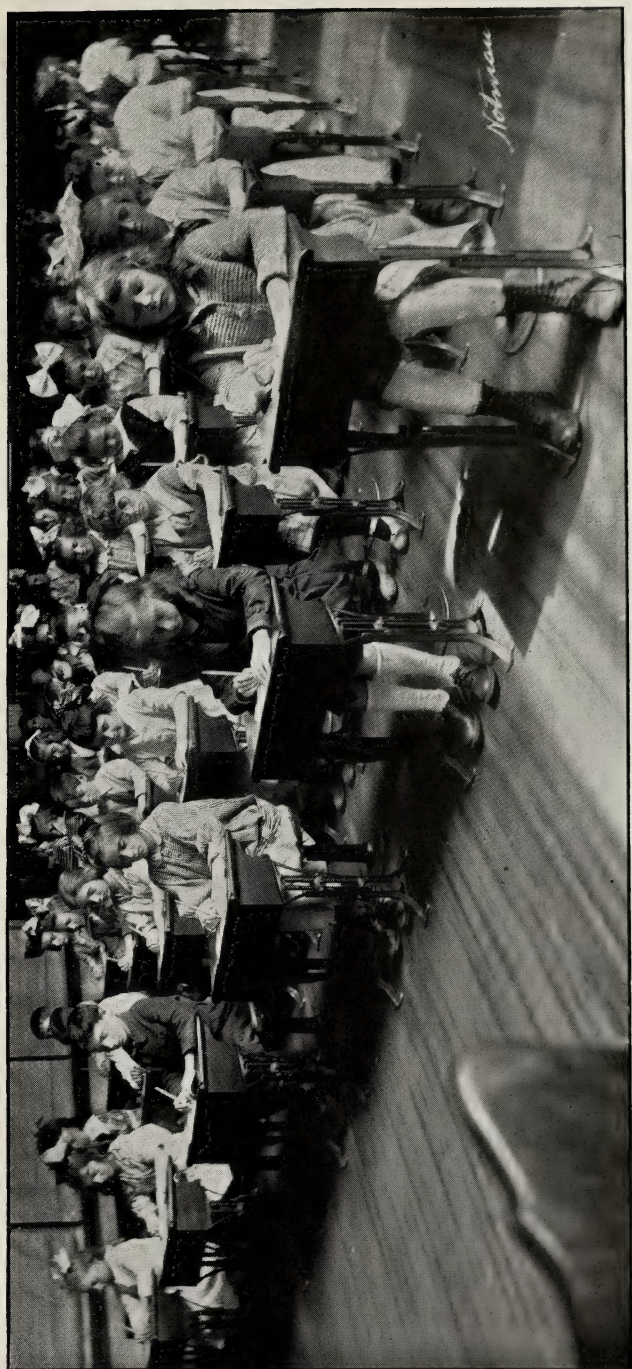
Ink wells have been placed in all primary grades and the use of pen and ink has been established throughout all the grades, thus promoting the conservation of eyesight and a light, rapid writing movement.

The Board of Schoolhouse Commissioners is to be commended for its very prompt response to a recommendation for the installation of larger desks in the first three grades. The latest new desks are entirely satisfactory. It is earnestly recommended that as soon as practicable, old, small-topped desks be replaced with the new broad-topped type.

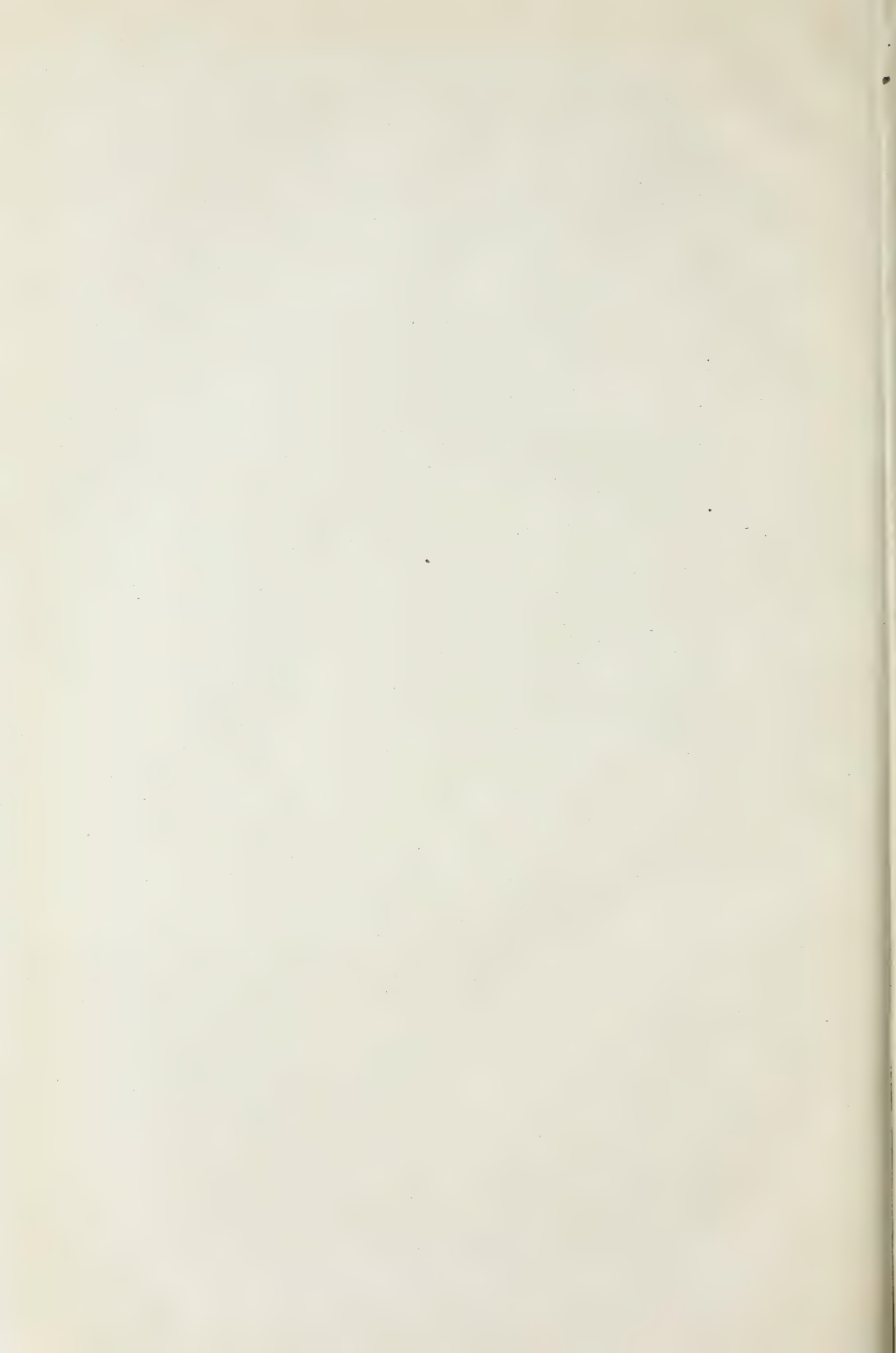
Unsupervised "busy work" or seat work with pencil and paper in which primary pupils revert to finger motion writing, so detrimental to the conservation of eyesight, free breathing and the correct physical growth of the child, has given place in the primary grades to the use of objective seatwork, correlative with the psychology and pedagogy of primary methods and the promotion of health.

DEPARTMENT OF MUSIC.

Favorable progress and improvement in the subject of music can be reported for the school year just finished. There has been definite improvement in the standardization of the music lessons given throughout the school system. The teachers in the grades are recognizing more and more and are accepting the emphasized instruction as to the necessity of giving the music lesson to the class in the various definite and progressive steps, as the call to attention, breathing exercise, tone drill, rhythmic drill and reading. There are some classes in which the standard plan is not sympathetically or properly carried out, either on account of poor teachers or because of the employment of substitutes.



GRADE III.—TEACHING CHILDREN TO WRITE WITH MUSCLES OF ARM.—FARRAGUT SCHOOL, MARTIN DISTRICT.



The actual reading of music has been reintroduced into the lesson for the second grade. It is expected that in due time this will restore the reading of music to the position it once held. At the same time it has been proven that the teaching of reading, as now in vogue, has in no way interfered with the "inspirational singing of songs," but has, on the contrary, increased the inspiration. The second grade has learned as many rote songs this year as ever before and the classes have seemed to be more keenly interested because of the introduction of a reasonable amount of reading. Children delight in the consciousness of a power to read from the printed or the staffed page.

The tone production of the classes has greatly improved and there was never before so little in it that would call for criticism. Seldom is any screeching or straining heard in the singing of high tones. Smoothness and evenness characterize the work. Owing to the most approved methods of instructing and of assisting pupils, the monotone has ceased to be as much of a problem as heretofore.

The School Committee did a service to the cause of music when it sanctioned the purchase and the use of all authorized music books on the list. Whether or not but one uniform system and set of books should be exclusively used is an academic and debatable question. That there are two sides to it is readily granted. Variety is gained in the use of many books, but a certain desirable essential uniformity is palpably lost.

The music book now being prepared for use in the seventh to the twelfth grades, inclusive, will relieve the present handicap of dissimilar editions, and make more generally possible assembly singing in the upper elementary and in the high school classes, wherever and whenever it is desired or opportunity is offered. The need of a book which shall contain in usable form a variety of material such as patriotic songs, hymns, folk songs, religious choruses, operatic choruses, light and grand opera choruses, love songs, art songs, carols and miscellaneous choruses has been known for many years. Many excellent music books exist, but a book that contains an arrangement adequate for voices of all grades of development is unknown but is highly desirable. Such a book should contain arrangements entirely suitable for unchanged voices or so-called mixed choruses. It is intended in this book to so arrange the different selections that it will be usable, entirely so, with the

unchanged voices in the upper elementary grades and also in the high schools where mature voices are found.

With this book in the hands of certain pupils in every section of the city it will be an easy matter to assemble 10,000 pupils, or double that number if desirable, and to have a monster chorus drilled to sing, without extra time for preparation, any number of hymns, or folk songs, or patriotic songs, using identical texts and arrangements.

Because of war conditions, violin classes were considerably disturbed last year. Many children left the classes to secure employment. Furthermore; it was difficult to secure instruments. A very creditable exhibition, however, was given by the classes from the several schools at a concert held in the Mather School on June 12, 1919. It was inspiring to witness over two hundred boys and girls playing in excellent tune, in exact time, and giving evidence of more or less musicianship. When it is considered that probably not ten per cent of these pupils would ever have owned a violin were it not for the class instruction furnished in the schools, and when it is known that a major part of these violin pupils from former classes have persevered beyond the school instruction, where their interest was aroused, and have studied with private teachers, the significance and the value of violin class instruction begin to be apparent.

The establishment of military bands received consideration last year. Some progress was made but conditions prevented the adequate development of the plan. Instruments were not to be had. The scarcity was so great that even the United States Government could not secure proper equipment for its bands. Since the beginning of demobilization, however, the Government has had on its hands an excess of band instruments. Communications were opened with the Government authorities in the hope that some of these instruments might be donated for use in the schools in connection with military drill. The free gift of band equipments, it was learned, may not be expected, but the offer was extended that desirable instruments may probably be had at a very substantial discount. A worthy military band or, better, worthy military bands, would give interest, impetus and aid to military drill, and besides there is a vocational element in the case. Students with a good knowledge of some instrument are in increasing demand, especially during

the vacation season. The number increases of those young men who partially defray their college expenses by their musical skill.

The system of "Outside Credit in Music" is well established in the high schools. The main difficulty is to prevent the pupils from studying with inferior teachers. In issuing instructions to candidates for the outside credit at the beginning of the school year, emphasis has been placed on the necessity of selecting none but acknowledgedly good teachers.

It is recommended that head masters appoint a teacher in each school who shall become familiar with the requirements of the outside credit course, to the end that pupils may be familiarized with the requirements and that they observe and live up to them. This specially detailed teacher in some schools has done commendable work. She should be in every high school.

It is recommended that head masters and principals be encouraged and urged to conduct weekly assembly singing in their respective auditoriums. As has been mentioned above, books will soon be at hand that will enable a principal or head master to unite part of his pupils with those of a neighboring school, to have and to sing the same music. Americanization would be furthered by these interscholastic concerts.

In some high schools a program difficulty has, in the past, interfered seriously with the desirable conduct of music. First, second, third and fourth year pupils have been assembled for the same music lesson. In such a situation the grade of work is often by necessity made to suit those who have the least knowledge. This is discouraging to the more advanced and is an impediment to their work. Third and fourth year classes may be united, when necessary, and the work adapted to their needs, but if the music course is well organized and progressive, classes ought not to be united before the third year. Instructions have been issued that ought to make the music lessons in all high schools as effective as it has been in a few of the best.

The war has re-established and emphasized the fact that music has power to inspire, to sustain, to sway and to comfort men. Community singing — using the word "community" in the sense of the work of an enlarged chorus — seems to have won a permanent place in the musical world. Songs and more songs, popular and select, in parts and in unison, accompanied and unaccompanied — but singing — everybody singing!

Give us, O give us the man who sings at his work! Be his occupation what it may, he is equal to any of those who follow the same pursuit in silent sullenness. He will do more in the same time — he will do it better — he will persevere longer. One is scarcely sensible of fatigue whilst he marches to music. The very stars are said to make harmony as they revolve in their spheres.

— Carlyle.

During the year just passed more songs than ever before have been sung in the schools. More children's choruses have been assembled. There have been evident more naturalness, more enjoyment in the work. In some schools pupils march singing to and from the assembly hall. They are *using* music more, much more, than formerly.

Some excellent out-of-school singing was done during the last school year. A chorus of 1,200 high and elementary pupils sang on Boston Common in the interests of the Liberty Loan and as an aid to a most worthy patriotic pageant of the allied nations done by the students of the Boston Normal School. Thousands of spectators, many of them foreigners, helped swell the choruses. It was a fine object lesson in team work and in Americanization. On Memorial Day, Grand Army veterans applauded the singing of 1,000 school children in Tremont Temple, and the vast audience united its voices with those of the youthful choristers — more community work. On the occasion of a reception given to 600 returned soldiers at the Dorchester High School, a school chorus, too large to be housed, participated in the reception, while surrounding thousands applauded and sang the familiar songs. This achievement gave much promise, if not entire proof, that the desire and the aim of the Department of Music are being accomplished, viz., *to have the school songs carry over into the home and the community.*

CONSERVATION OF EYESIGHT CLASSES.

Five classes in the conservation of eyesight now exist with a total of sixty-two pupils. The work is developing — the word is used guardedly — slowly but, it is hoped, sanely and correctly. There has been available no great body of information as to positively approved methods and means in the conduct of these classes.

Mr. Edward E. Allen, the director of the Perkins Institute for the Blind, told the writer that the problem of teaching the pupils in these classes is more difficult, in his estimation, than that of teaching the totally blind.

Mrs. Wilfred Hathaway, secretary of the National Commission for the Prevention of Blindness, lately gave a class demonstration before all the teachers engaged in this special work. She commended the results attained in Boston and made some valuable recommendations that have been accepted and put into action.

A commission composed of eye specialists has made a report on the size of type that is correct, and which, if used, will give the least eye strain to pupils of impaired vision. Twenty-four-point type was recommended.

This sentence is set in 24-point type.

All the sight-saving classes in Boston have been well supplied recently with clear-typed books.

Attention has been given to the system of lighting that has received scientific approval. The use of the typewriter as a tool is contemplated; its vocational use in these classes does not seem to be warranted.

Praise is due to the teachers who are veritable pioneers in this work. They have been in the highest sense of the term professional. They have expended an enormous amount of time out of school hours in experimentation and investigation and in quest of even the smallest element that might be of value to those in their charge. They have visited the homes and advised the parents not to allow these pupils to disregard the instructions they have received for the conservation of their sight. All successful methods have been "pooled" for the good of all. Two teachers at their own expense attended from June 24 to 27 at Toronto the sessions of the American Association of Workers of the Blind. What they there acquired will become the professional property of their fellow teachers.

SCHOOL ATTENDANCE DEPARTMENT.

There is little to be said of the School Attendance Department in addition to what appeared in a late Superintendent's report. The supervisor of licensed minors, who reports to the chief attendance officer, during the school year just closed has done some particularly effective work in diminishing almost to the vanishing point the number of unlicensed minors. Licensed newsboys who sublet their routes to the unlicensed have been summarily dealt with.

During the school year 1917-18 there were licensed 715 newsboys, 36 bootblacks and 16 peddlers. For a corresponding period in 1918-19 the records show 1,081 newsboys, 120 bootblacks and 27 peddlers.

The year just closed had some particular phases that operated against school attendance and made for truancy. The influenza epidemic broke the continuity of school sessions. There was for an extended period excessive nonattendance — a condition that is conducive to truancy. The return of the soldiers lured the boys and girls from the schools to witness the troop trains from the pier to Camp Devens. The drawing power, almost irresistible to the young, of a single circus is proverbial, but when two large circuses are licensed in one brief month the work of attendance officers is inordinately multiplied. In the face of these and other obstacles of this *annus mirabilis*, it is gratifying to note that the number of individual truants shrunk from 2,528 last year to 2,323 this year.

DISCIPLINARY DAY SCHOOL.

The death last fall of the original appointee to the Disciplinary Day School had a crippling effect on the conduct of these most difficult classes. Substitutes did all that could in reason be expected of them but the efficiency of the school shrunk palpably.

There have been appointed to take office in September two teachers who have had much experience in all boys' schools. The disciplinary classes have been transferred from the old, ill-sited and ill-fitted Way street building to suitable rooms in the Sarah J. Baker School. The advent of teachers trained for the work, together with improved housing conditions, ought to make for the betterment of those unfortunate delinquents who fail to respond to normal treatment. Members of the Attendance Department, and especially its chief, have given advice, guidance and unceasing service to the cause of boys in the Disciplinary Day School.

Respectfully submitted,

A. L. RAFTER,
Assistant Superintendent.

APPENDIX C.

REPORT OF ASSISTANT SUPERINTENDENT
FRANK W. BALLOU.

MR. FRANK V. THOMPSON,

Superintendent of Schools, Boston, Mass.:

DEAR SIR,— In response to your request, I herewith respectfully submit a brief report on the development of intermediate schools.

PROGRESS IN THE DEVELOPMENT OF
INTERMEDIATE SCHOOLS.

Progress in the development of intermediate schools in Boston during the school year 1918-19 has been made in the perfecting of the organization of that type of institution rather than in increasing the number of such schools. The George Putnam School became an intermediate school through the providing of ninth grade instruction in September, 1918. Owing to the limited number of pupils desiring ninth grade instruction, the Chapman School found it desirable to abandon ninth grade work in September, 1918. Therefore the number of intermediate schools in 1918-19 is ten, the same as in the preceding year.

CONFERENCE COMMITTEE.

In September, 1918, the Superintendent appointed a conference committee, consisting of three head masters of high schools and three intermediate school principals, as follows:

Oscar C. Gallagher	West Roxbury High School.
Myron W. Richardson	Girls' High School.
James E. Thomas	Dorchester High School.
Gertrude E. Bigelow	Hancock School.
James H. Leary	Emerson School.
W. Lawrence Murphy	Mary Hemenway School.

The Superintendent and Assistant Superintendents Burke and Ballou have uniformly met with the committee. The

committee has held thirteen meetings during the year, and the unusually regular attendance of the members at each meeting shows the interest and seriousness with which the committee undertook its work. To that committee has been referred all questions of organization, administration and policy of intermediate schools. No changes have been made and no new policies have been adopted without first having been considered and acted favorably upon by this committee. Following favorable action by the conference committee, matters have been referred to the Board of Superintendents for consideration and official approval.

DIFFERENTIATED COURSES OF STUDY.

Individual differences among pupils and varying educational interests are fundamental in the reorganization of education in the upper grades of the elementary school. Since pupils differ as to their capacities, interests and probable future educational careers, the intermediate school undertakes to provide education in accordance with those capacities, interests and probabilities. Hence, slightly differentiated courses of study are provided for pupils in the intermediate school at the beginning of the seventh grade, as follows:

1. Intermediate school course with mathematics.

This course is intended primarily for those pupils who are to pursue preparatory courses for college in the senior high school.

2. Intermediate school course with clerical practice.

This course is intended for those pupils who are to leave school at the end of the intermediate school period, and for those pupils who are intending to take a commercial course in the senior high school.

3. Intermediate school course with mechanic arts.

This course is intended for those boys who are to leave school early to earn a living in industry, and for those who are preparing for the Boston Trade School or the Mechanic Arts High School.

4. Intermediate school course with practical arts.

This course is intended for girls who are to leave school early to become home-makers for themselves or for others, or for those who are preparing for the Trade School for Girls or the High School of Practical Arts.

These courses have in common the fundamental subjects,

such as English, arithmetic, geography and history. While it is assumed that these fundamental subjects will be somewhat related to the specialized subject of each differentiated course, nevertheless the major portion of the content is identical for all pupils. This makes it possible for pupils to transfer readily from one course to another to meet a possible change in educational purpose or interest. It also insures a common content of education in fundamental subjects to all pupils through Grades VII and VIII, and limits the differentiation to a comparatively small portion of the total instruction received.

Owing to the attempt to enlarge and enrich the course of study in the upper grades of the elementary school, the course has been gradually overloaded, not only in the number of subjects pursued simultaneously by pupils but also in the content of the various subjects. In the usual elementary school of today a pupil pursues simultaneously twelve or fourteen subjects. In each one of the fundamental subjects there is a fairly comprehensive and well defined content to be covered during the year. In junior high schools throughout the country a systematic attempt has been made to reduce the number of subjects pursued simultaneously and to intensify correspondingly the work in the fewer subjects which are taught.

As a beginning in the reduction of the number of subjects pursued simultaneously the conference committee recommended, and the Board of Superintendents approved, the provision that pupils should take either drawing or science, but not both, through Grades VII and VIII. While this provision seems a step backward to the friends of either subject, nevertheless it is believed that it is not only desirable from the standpoint of instruction in these two subjects, but inevitable that the number of subjects pursued simultaneously by pupils must be reduced if children are to do as good work as they ought to do in the subjects which they pursue in Grades VII and VIII. The conference committee believes that this is only a beginning in this respect and that later it will be necessary to make similar provision for other subjects.

In practice it is contemplated that those pupils who have shown proficiency in drawing will naturally elect drawing, and that those pupils who have shown interest in nature study and elementary science in preceding years will continue in that subject. Whatever may be said with regard to the desirability of either subject as an instrument of education, it must be

obvious to those who know the work of the children of the elementary schools that certain children derive only a minimum of benefit from the pursuit of either one of these subjects in Grades VII and VIII as now taught. The above provision should result in a more homogeneous group of pupils pursuing either subject, and the possibility of better work on the part of teacher and pupils should be materially increased.

RAPID ADVANCEMENT.

There are three distinct methods in vogue throughout the country which provide for the rapid advancement of pupils through school:

1. Provision is made whereby the more capable pupils proceed at a faster pace than the ordinary pupils.

This is the plan which has been in operation in Boston by means of which pupils completed the course of study of the sixth, seventh and eighth grades in two years. By this method pupils do an increased amount of work each year. No part of the course of study is skipped, but pupils master a year's work in less than one year.

2. Provision is made whereby increased credit is given pupils for a superior quality of work.

Under this system a pupil who earns the highest grade is given a larger amount of credit than the pupil who earns only a passing grade of C. For example: A pupil who earns a grade of A in the subject may be allowed five points of credit toward his diploma; a pupil who earns a grade of B, four points, and a pupil who gets only a passing grade, three points. Through the accumulation of all A's, or A's and B's, a pupil can secure enough additional credit in three or three and a half years to earn a diploma. This is generally spoken of as "credit for quality of work."

3. Provision is made whereby pupils carry additional work as a means of earning additional credit.

This is the method which has been introduced into the intermediate schools in Boston. Pupils who proceed at the regular rate of progress through the intermediate and high school complete the course of study in six years by earning 20 diploma points in Grades VII and VIII combined and 20 diploma points in each of the four succeeding years. In the intermediate school provision is made, however, under the regulations whereby pupils may carry a modern foreign language in Grades

VII and VIII over and above their regular course and thereby earn 25 instead of 20 diploma points toward a 100-point high school diploma. The regulations also provide that each pupil who successfully pursues work amounting to 25 diploma points in any given year is automatically given the opportunity of carrying a 25-point program in the following year. If he succeeds in carrying a 25-point program through the seventh and eighth years and through the next three years he will obviously have earned 100 diploma points by the end of five years, thereby completing the combined six-year junior and senior high school course in five years.

This method providing for the rapid advancement of pupils should be given a thorough trial. Like most provisions for intermediate school instruction it should be considered experimental. Teachers and principals should study the results secured under this provision with a view of reconsideration after an accumulation of practice under it. A decided limitation has been imposed on the number of pupils who are permitted to carry the extra subject in Grades VII and VIII in that only approximately fifty per cent of the pupils of any school or district will be permitted to carry such a program. It has been generally conceded that to limit the study of a modern foreign language to any proportion of the pupils is undemocratic. Some readjustment, therefore, may be expected.

PREPARED AND UNPREPARED LESSONS.

One of the most interesting and promising features worked out by the conference committee during the past year is the division of recitation periods in the various subjects in Grades VII and VIII into prepared and unprepared lessons. For example: The subject of English is allowed 600 minutes of time in Grades VII and VIII combined, or 20 recitation periods of 30 minutes each. These 20 recitation periods are divided into 8 prepared lessons and 12 unprepared lessons. This means that in Grade VII a pupil will have 4 home lessons in English per week and 6 recitations in English for which no definite preparation on the pupils' part outside of class has been made. This division of prepared and unprepared lessons will necessitate a very carefully prepared schedule of days on which pupils are to have home lessons. The number of prepared lessons has been worked out in such a way that not more than one hour of home study will be required of pupils, since each

pupil not taking a modern foreign language will have at least one 30-minute study period each day under the supervision of a teacher.

STUDY PERIODS.

Pupils who take the regulation course covering 20 diploma points of work in Grades VII and VIII will each have one 30-minute study period per day, during which time they will be under the supervision of a teacher, who is expected to assist them in their study. This provision is a marked innovation in seventh and eighth grade work and much attention needs to be given to it, in order that pupils shall learn systematic habits of study and in order also that this utilization of 30 minutes each day in study will have the largest possible effect on the character of work which they do in their recitations.

DEPARTMENTAL ORGANIZATION.

Departmental organization is to be found in each intermediate school and in many of the larger elementary schools where the ninth grade work is not offered. In order to secure promotion by subject, departmental organization is essential. Provision must be made in the system of program-making whereby pupils who have failed in a major subject in Grade VII may have the opportunity of repeating that work in Grade VIII. The block system of program-making outlined to principals during the year, and published in "Educational Standards" for March, 1919, indicates probably the best method of organizing a school. However, principals are not required to follow this plan, but will be expected to secure equally good results by whatever plan they follow.

MODERN LANGUAGE INSTRUCTION.

Instruction in Spanish, French, German (in a limited number of schools) and Italian is offered in Grades VII and VIII not only in the ten intermediate districts but in a dozen or more elementary districts of the city. Instruction in modern foreign language and in elementary algebra and geometry represents the general attempt to introduce in the earlier years typically high school work. The extension of this work is contingent upon securing adequately prepared teachers to give the instruction. The supervision of modern foreign language has been assigned to Miss Marie A. Solano of the Normal School, who devotes a considerable portion of her time inspecting class

room work. She also passes upon the qualifications of the teachers who desire to offer instruction in a modern foreign language, and no teachers are permitted to teach modern foreign language in intermediate or elementary schools who do not show a degree of proficiency satisfactory to Miss Solano.

SUCCESS OF INTERMEDIATE SCHOOL PUPILS.

This annual report is purposely a general statement of what is contemplated in intermediate schools rather than a general appraisal of present conditions in intermediate schools, or of results achieved. It is appropriate, however, to include in this annual report a bit of evidence which supports the general belief that through the introduction of intermediate schools the Boston school system will provide better education for pupils than has heretofore been provided.

In September, 1918, for the first time, pupils entered the senior high school who had pursued ninth grade work in intermediate schools. Since ninth grade work in intermediate schools corresponds with first-year work in the high schools, such pupils entered the second year of the senior high school. How well did such pupils maintain themselves in second-year work as compared with pupils who had taken their first-year work in the senior high school?

To answer this question, reports were secured from each high school, showing the number of A's, B's, C's, and failing marks earned by (a) those pupils who did their first-year high school work in intermediate schools, and by (b) those pupils who did their first-year work in high school, at the end of the first two months of the school year. The result of the tabulation was as follows:

	Per Cent of A's.	Per Cent of B's.	Per Cent of C's.	Per Cent of Failures.
Intermediate school pupils in second year.....	9	28	45	18
High school pupils in second year.....	10	30	46	14

Since this is the first class that intermediate schools have sent into the second year of high school, this showing is unexpectedly creditable, and it is confidently believed that intermediate schools will not have to make any excuses for the quality of their product.

FUTURE PLANS.

In September, 1920, pupils will enter the high schools of the city on the 100-point diploma basis. Twenty points of the 100 will have been earned in Grades VII and VIII of the elementary schools, and 40 of those points will have been earned by pupils who enter the senior high schools from regular ninth year intermediate schools. This provision means that all elementary schools should establish as far as possible some plan of promotion by subject, in order that pupils may make up in the eighth grade work in which they were deficient in the seventh. Pupils who do not complete with a satisfactory scholarship grade the work in any subject during Grades VII and VIII will not carry to the high school diploma credit for such subjects. For instance: If a pupil has a grade of D in English, which is not passing, during his seventh and eighth year of work, he will not carry to the high school 5 points of credit allowed for English. In such a case the high school will assign such a pupil to regular first-year high school English, as has been done in the past. Such a pupil, however, will be expected to earn 5 additional points (not necessarily in English, however) to take the place of the 5 points in English which he did not earn in Grades VII and VIII.

Since one of the most important factors in the development of intermediate schools in Boston is properly qualified teachers, the attention of teachers is called to the opportunity which the intermediate school is likely to afford. Competent teachers of the middle grades who desire upper grade work are encouraged to take the examination for intermediate school certificates and secure a rating. While all teachers who hold a certificate of eligibility qualifying them to teach in the elementary schools are now eligible to teach in the intermediate schools, it is altogether likely that higher qualifications will be established at some future time. Furthermore, teachers are advised to take systematic courses through the year or in summer schools to prepare for intermediate school work. It is hoped that late afternoon courses for teachers already in the service may be developed at the Boston Normal School to provide additional opportunity for teachers to qualify for intermediate school work.

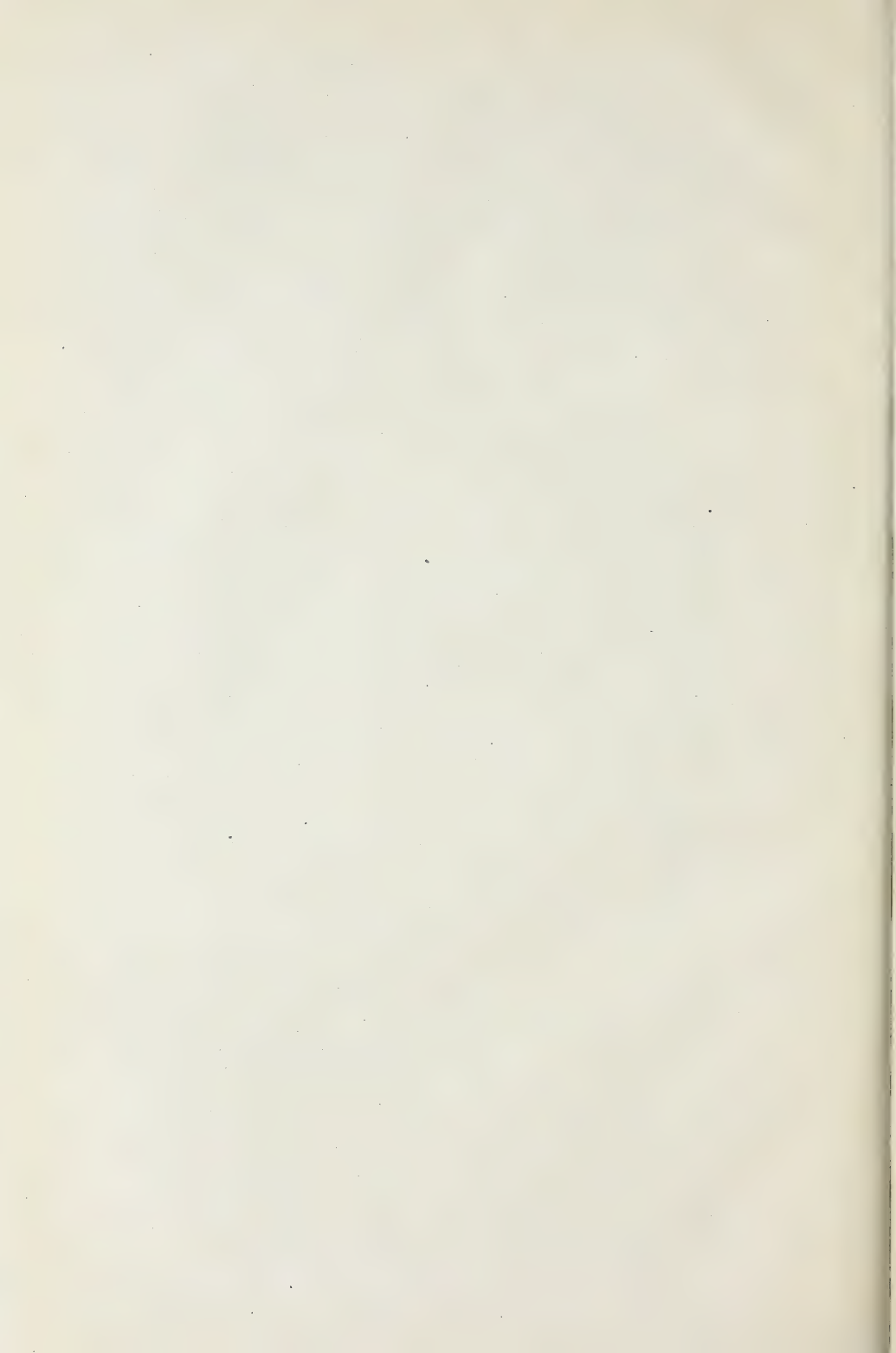
Respectfully submitted,

FRANK W. BALLOU,

Assistant Superintendent.



THE LIBRARY CORNER.—BENJAMIN POPE SCHOOL.



APPENDIX D.

REPORT OF ASSISTANT SUPERINTENDENT
MARY C. MELLYN.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

MY DEAR MR. THOMPSON,— This report will discuss the reconstruction of our educational practice in two phases of our school work; namely, the changes in teaching method in the elementary schools, and the proposed change in the preparation for college graduates for the school service.

I. THE CHANGES IN TEACHING METHOD IN THE
ELEMENTARY SCHOOLS.

At this time, when so much attention is given to the methods of the intermediate and high schools, an equal amount of interest is inspired by the plans for reconstruction in the elementary school.

The aim of elementary education, as I see it, is threefold:

1. *To establish right habits* — physical, intellectual and moral.
2. To give pupils skill in the use of the school arts, so that during each year they may grow in power over these tools and thus make secure their educational inheritance.
3. To teach social coöperation through class room opportunities, so that each year actual practice may strengthen the principles underlying life in a democracy.

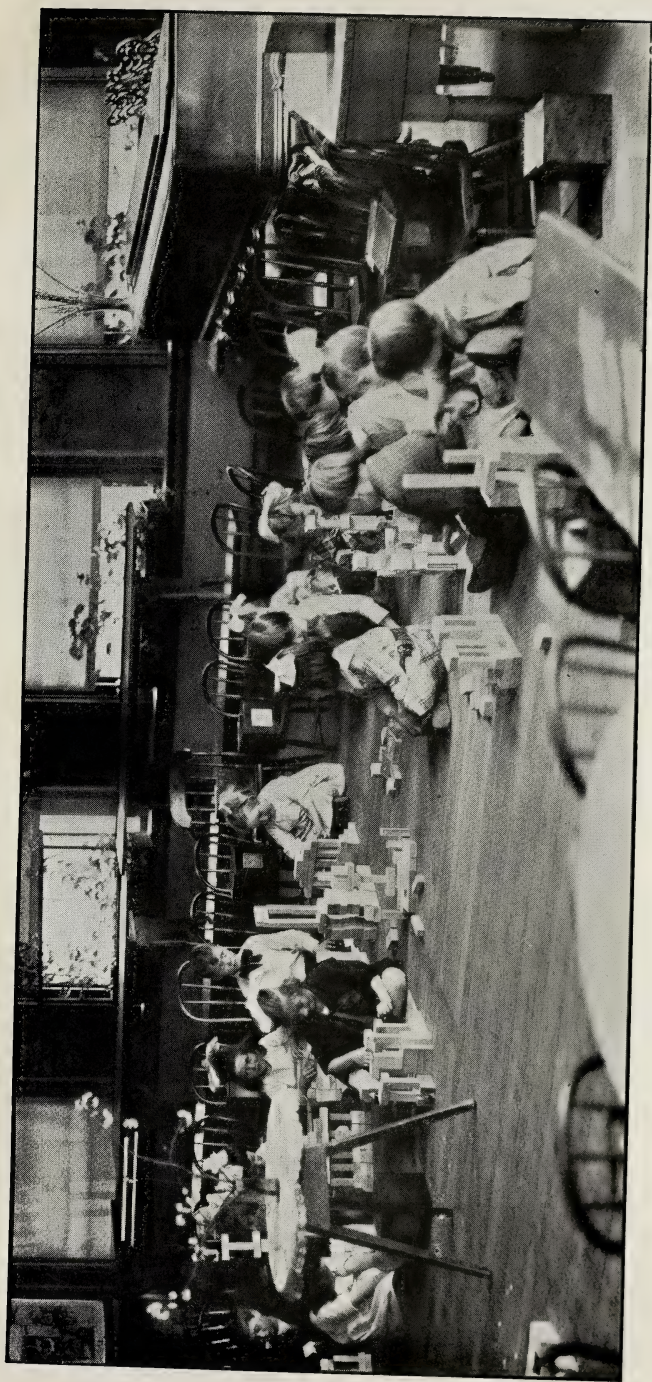
In working out this threefold aim the elementary school has too often stressed the teaching of the school arts in such a way that a formal approach to a formal end has been the essential characteristic of method in the first six grades.

There has been too little appreciation of the fact that the method of learning by which the child grows outside of school may very well be applied within school, and that the school arts

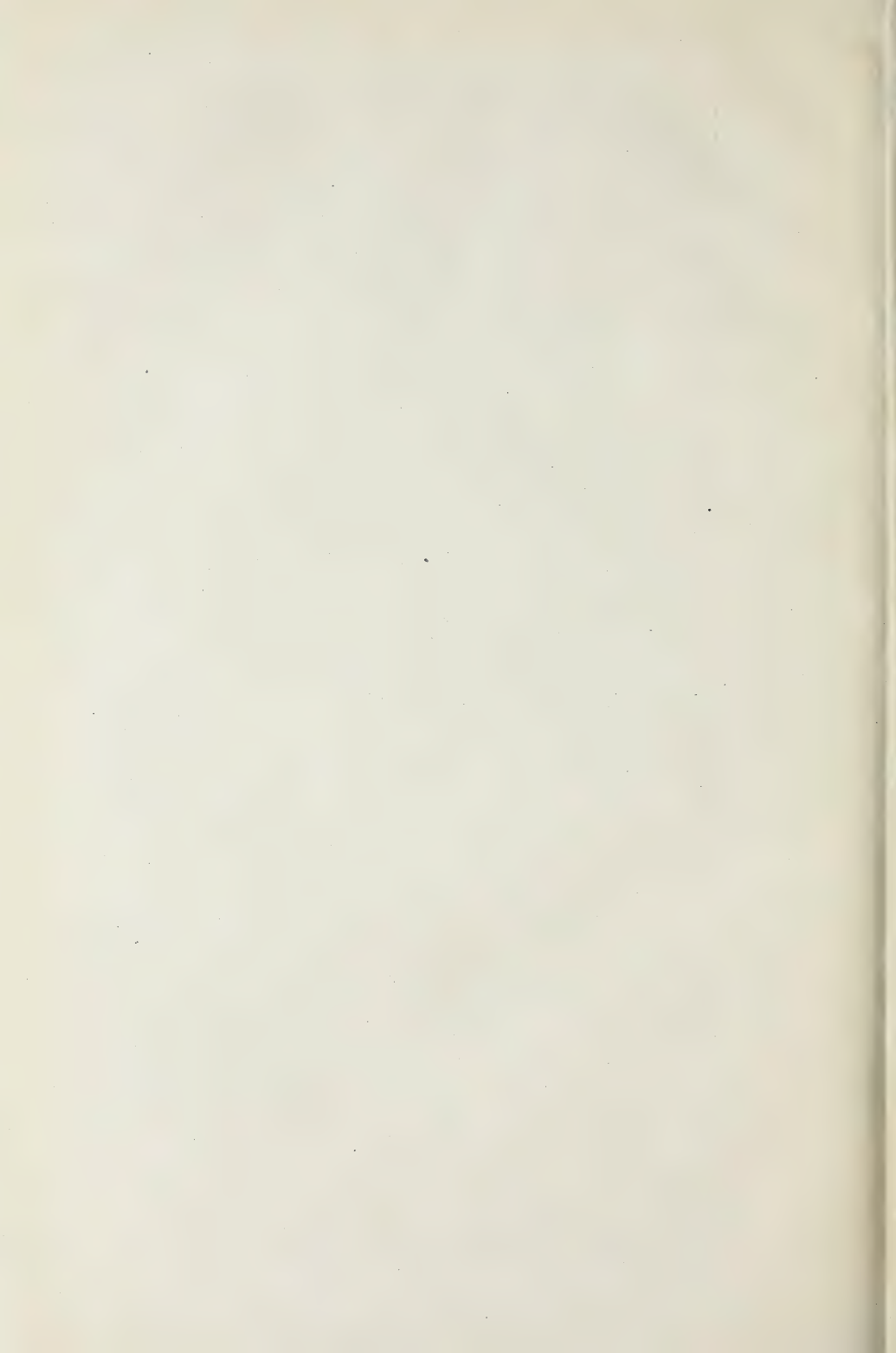
lend themselves readily to opportunities for social coöperation. Inasmuch as the child "learns by doing" all through his early years, he may well apply this method within the bounds of the school program. "Learning by doing" implies independent activity as well as group coöperation — this is the child's way of approaching experience, and the reconstruction of elementary education will provide for the satisfaction of this vital need.

The "project method" is the child's own device for solving the problems which his environment brings him. His is always a "purposeful activity"—individual in his early years, social in the later years of the elementary school stage. So through this method, we find the natural way of approaching the reconstruction of elementary education. Its advantages are that it carries over the child's interests from his world outside to the schoolroom, that it is in harmony with laws governing his growth, and that it is fitting him constantly for problem solving and for living in coöperation with his fellows. In this way school is a counterpart of life outside, and not a place of preparation for a remote future. In this way the child learns to live. With the many advantages which will come through the wise administration of the project method, its dangers must be clearly seen. That "education is self-expression under guidance" must not be forgotten; that the child may not be left wholly to himself in the setting up, nor always in the solution of his problems, must be understood; otherwise the opportunity to teach social coöperation will be missed. Then, too, if this method is to prove valuable, all children in the class, not a few, must find a way to self-expression through projects. Administered by enthusiasts who, through it, train only those children already strongly self-directing, this method will never replace the traditional in class room practice; administered with opportunities for growth for all children, we have the basis for careful conservation of individual capacity, for developing leaders as well as intelligent followers.

In the belief that a beginning might well be made in the first grade of the primary school, a definite plan for connection with the kindergarten has been set up. Much of the formalism with which tradition has surrounded the beginnings of reading, writing and number has been broken down through carrying over of group projects, construction, play and independent activities, while at the same time the regular course of study in the school arts has been completed. The schools participating



THE KINDERGARTEN ROOM SHOULD BE USED FOR THE "FREE HOUR."—BENJAMIN CUSHING SCHOOL.



in this experiment are as follows: the Wells, the Dearborn, the Oliver Hazard Perry, the Hancock and the Mather. Classes in different sections of our city were selected in order that the experiment might have an influence throughout the city.

In Boston many sporadic and spasmodic attempts have been made in the last twenty years to extend the influence of the kindergarten into the primary school, but the kindergarten teacher has always been the propelling influence. The kindergarten will never link up with the first grade in this way permanently, nor will the connection be made by establishing a departmental system between the kindergarten and the first grade with teachers alternating in each class. Facing the proposition squarely, we know that the teacher of the first grade must believe that the methods of the kindergarten can be transplanted into Grade I, must feel that formal accomplishment may be replaced by much that is informal, truly pedagogic and thoroughly worth while. She must make the connection. Reaching into the kindergarten for the background of childish experiences, she will translate these through the medium of reading, writing and arithmetic into a knowledge and understanding of the great world without. The play life of the child, as recognized in the kindergarten, will go on through the wisdom of the primary teacher, not only in the first grade but through the primary years. The constructive activities, the projects of the child, will grow into a deeper life significance as he interprets his surroundings through his projects, and as he enters the world of signs by their help.

The connection then is to be made, I believe, by the teacher of the first grade as she reaches over into the kindergarten for all that it holds for the child. *The work of the kindergarten is to build for the first grade by giving the child a rich and varied background of experience which his next teacher will illuminate and translate into even richer and wider resources through the medium of the school arts.*

With this principle in mind, the teachers in our city who have made this experiment feel that we are ready to give the movement a wider impetus, for we know that our ground is sure and stable. The regular work of the grade has been accomplished, and we have established a change in method.

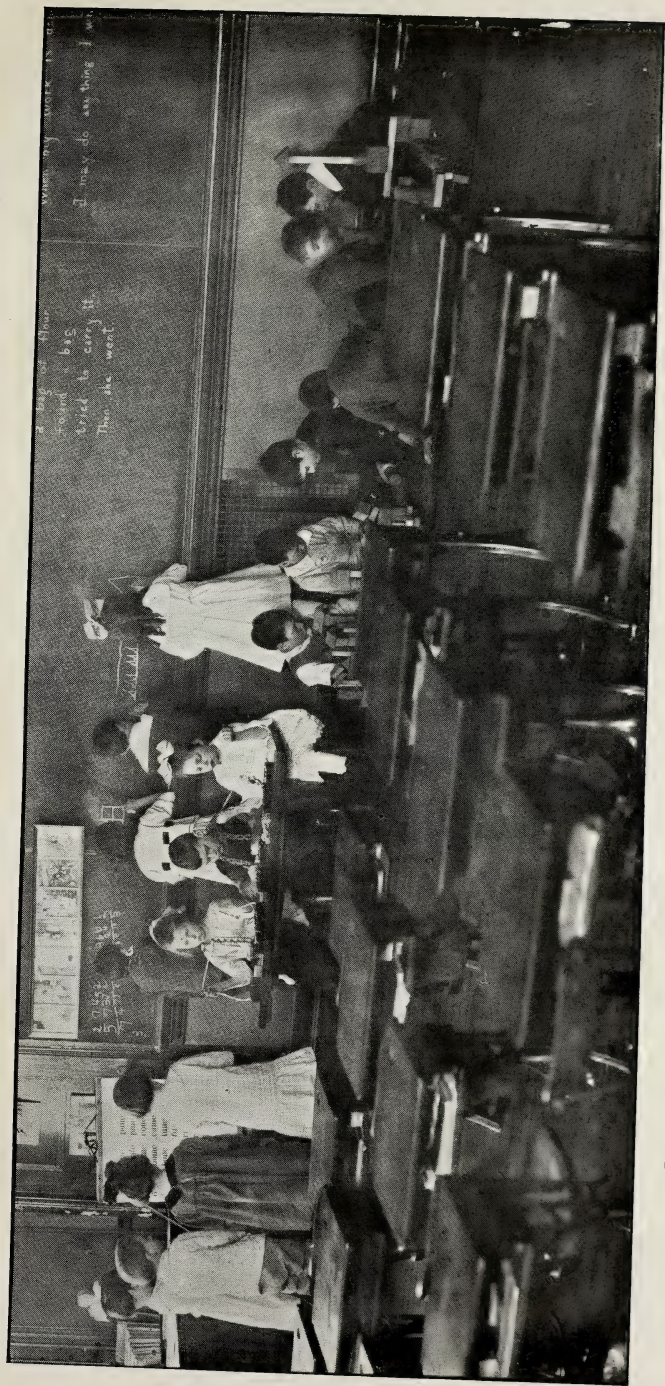
We believe that a five-hour academic day as laid down in our school program is too much for the children of the first grade. Accordingly it was decided to give to the regular work

of the grade the first four hours of the day and to use the last hour for the drawing required in the regular program, for story-telling, for dramatics, for construction and for free activities. This plan strictly adhered to by the teachers making the experiment proved that all the academic work laid down in the course of study could be accomplished in a four-hour day. Standards which had been attained before were reached and exceeded, and the children were sent in to Grade II with a better preparation because all learning had been a joy. The last hour gave to the child much opportunity for independent activities. He was free to choose building on the floor with a group, reading in the library "corner," knitting, bead stringing, dramatics, plasticene work, etc. One interesting thing in this hour was the "play school" which groups of children developed, in which they taught little groups of their classmates, and the "play store," which accomplished a deeper purpose than that which little children set up.

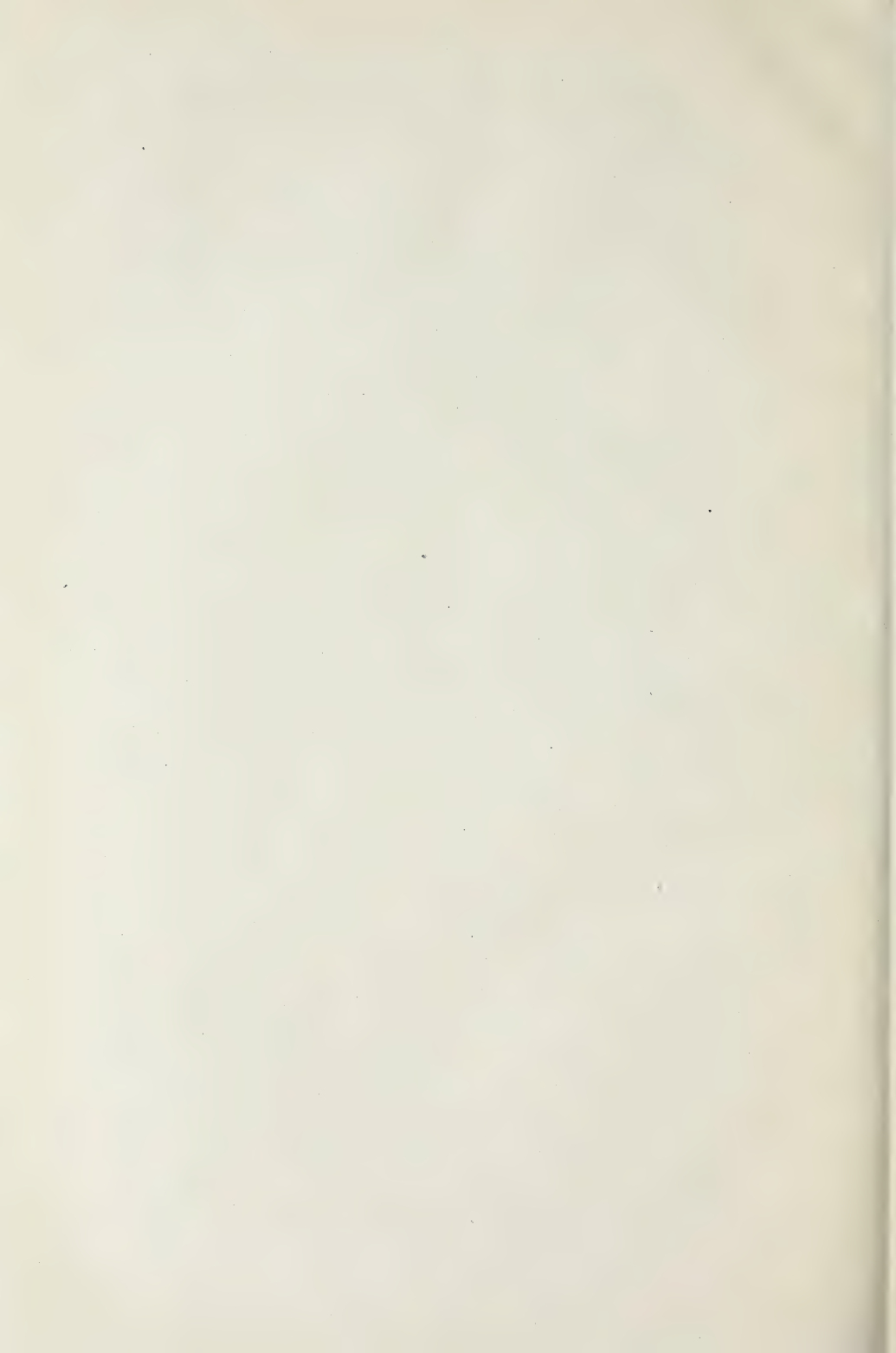
These projects proved of interest all through the day. When the required seat work, used to supplement the definite lesson, was finished, the floor space with its blocks and treasure boxes, which contained many independent possibilities, were eagerly sought, while leadership developed along many lines. The child who could knit well helped her neighbor quietly and efficiently, or the group on the floor worked out new and various possibilities, fitting into the life of the schoolroom, home and community, and applying the various powers developed through the school arts and suggested many times by seasonal, holiday or environmental conditions.

It will be a long time before the screwed-down seats of the traditional class room will disappear, but platforms, large desks for teachers and number tables may be removed, and the screwed seats grouped into smaller compass, and thus free space provided for floor activities in even our oldest buildings. Our problem in the primary school will always be adjustment of new phases of the work to traditional handicaps which we must meet. In how many of our buildings is the kindergarten class room in use in the afternoon? The teachers making this experiment found that wonderful opportunities were provided for the last hour activities in the kindergarten room with its space and material.

Let me quote from the reports of teachers who carried on this experiment—



BEAD STRINGING.— FLOOR PROJECTS.— INDEPENDENT PROBLEMS.— MARGARET FULLER SCHOOL.



Is it necessary for children of the first grade to remain in their chairs for long hours to accomplish the work of that grade? Not only is it unnecessary but also unnatural. Why not have one group of children working at the desks, another group building on the floor, another working with plasticene and the remainder with their teacher? The traditional teacher will say, "What of the discipline?" Early in the year children discover that quarreling with others or molesting and breaking down the work of other children brings with it its sure punishment, and children learn from one another coöperation and fair play — if they are to go on enjoying the group.

Is not this the way to teach children to live?

In my own class I begin to train the children for "Independent Activities" the very first week. Class lessons are of short duration at that time, and most of my work is with small groups. These groups are continually moving from one kind of work to another, and often all the children are out of their seats, some finding words, some studying at the chart, some weaving, some knitting and some building on the floor. I surprise the children by having new materials from time to time, so that their interest is always maintained, and the activities in the room are so kaleidoscopic in their nature that there is no time or occasion for any child to get into mischief.

The "treasure boxes" signal opportunities to the children to do something. Each child has his own deep pasteboard box in which are all sorts of possibilities for independent activities or group projects. Each contains beads, small blocks, knitting and weaving materials, scissors and paper for simple construction. The combination of a group of treasure boxes made possible an afghan for a soldier boy, the furniture for the doll's house, the making of Christmas decorations and many more projects which brought deep satisfaction to all of us.

In addition to these independent activities, the last hour of the day is put aside for "free play." No academic teaching is done during that period — games, stories, dramatics, papercutting, building, weaving, knitting, picture puzzles, all find their place then. Often the children choose their activities, but the session never closes without my oversight of the work of all. It is at this time that I have a chance to chat with the boys and the girls, to realize what their home conditions are, and to begin to bridge the gap between the school and the home. It was during one of these talks that I discovered that one mother had had only bread for the children for the last few days, and that another's father and mother both worked, and whatever the weather conditions might be the child remained in the streets until the parents returned home at nine o'clock at night. Once discoveries of this sort are made, it is natural for the teacher to become the social worker, and to attempt to remedy conditions.

The "library corner," the half-dozen kindergarten chairs in an unoccupied space near a book shelf, which the neighboring library or the school has supplied with children's literature — this proves a source of delight and pleasure for the child all through the day. He learns that this privilege and delight is his only when the work assigned him has been completed, for the school day must have its definite tasks as well as its margin of leisure.

These schoolrooms with their projects, treasure boxes and library corners are typical of the changes which the years will bring to the elementary school, not only in Grade I but throughout the first six grades.

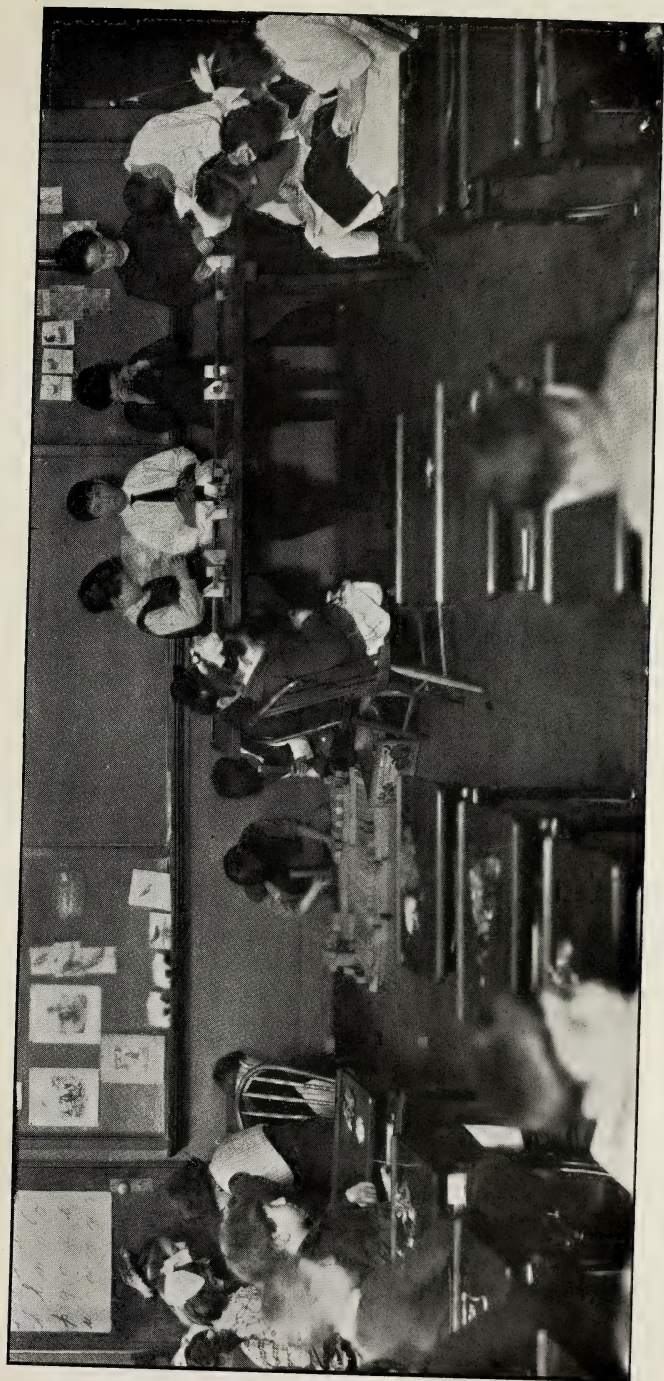
I am certain that the statement and the pictures which accompany this report will indicate to you that we have accomplished the connection between the kindergarten and the first grade. A thoroughly sincere piece of work has been done with no desire other than that of accomplishing a task which will mean the professional advancement of the primary schools. The work has been done in harmony with the best in modern education, and the abiding interest of the child in "learning by doing" has been most carefully conserved. This has been done, too, with no sacrifice on the part of any child of the traditional work of the first grade which we cannot set aside in these days of economic pressure, but which we know may be done with the spirit of the kindergartners, by the teacher who "lives with her children."

II. RECONSTRUCTION OF COURSE FOR COLLEGE GRADUATES WHO DESIRE TO TEACH IN SECONDARY AND INTERMEDIATE SCHOOLS.

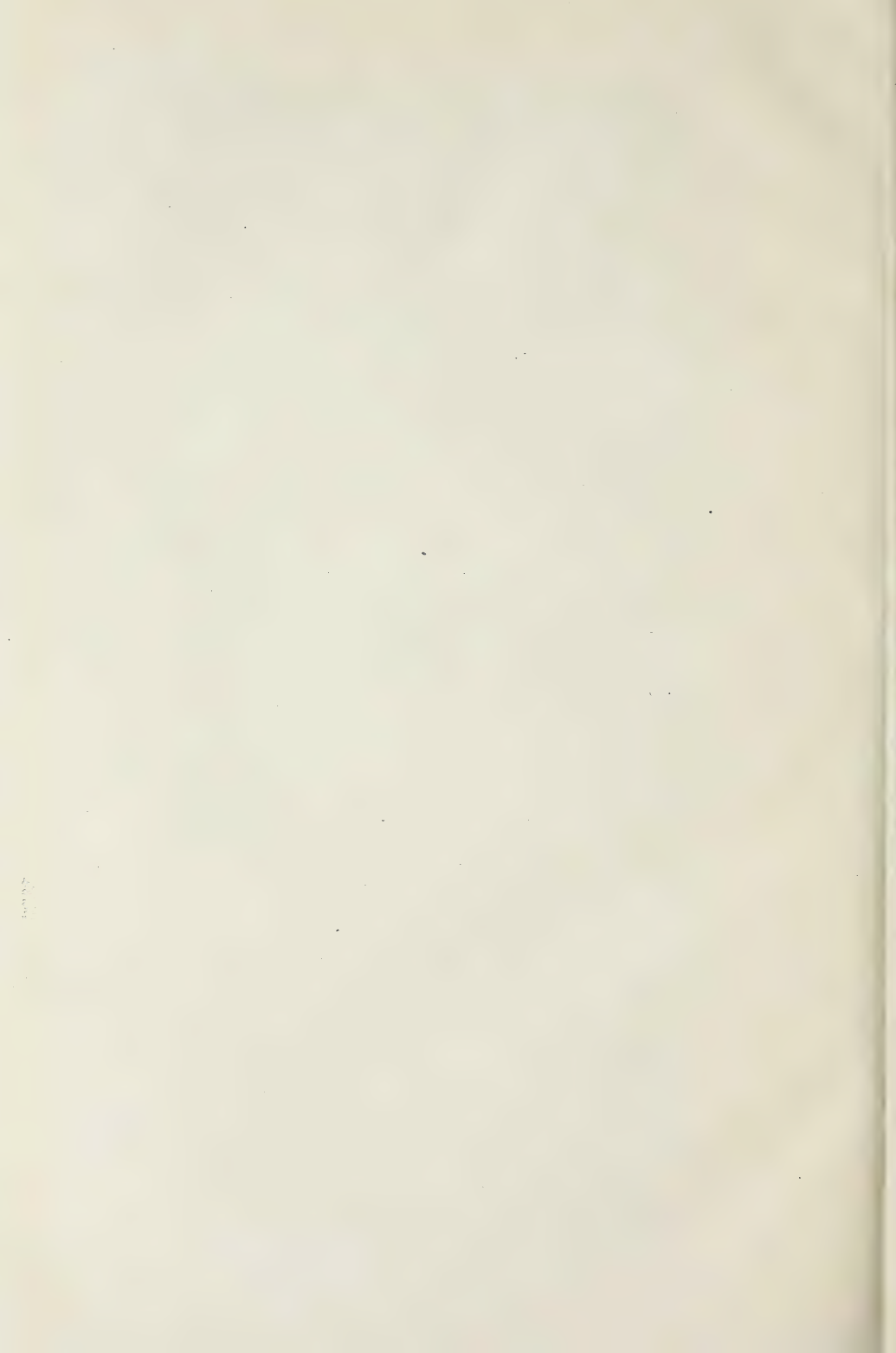
For many years a one-year course of training for teaching in high schools has been offered in the Boston Normal School to graduates of colleges. This course consisted of five months of directed practice work in the schools of this city under the supervision of the Department of Practice and Training, and five months of academic work in the Normal School. On the completion of this course, students were qualified for the examination for the certificate granted to junior assistants in high schools, and were eligible for appointment in elementary schools.

At the same time a course of training in the graduate schools of Harvard or Radcliffe, approved by the Board of Superintendents and leading to the degree of Master in Education, was accepted as a qualification for the Junior Assistant certificate.

During the past year "an arrangement was effected between the School Committee of Boston and Boston University, likewise between the School Committee of Boston and Boston College, whereby courses leading to the degree of Master in Education will be offered to residents of the City of Boston who are graduates of colleges approved by the Board of Superintendents." (Minutes, May 19, 1919.)



KNITTING.—CARDBOARD CONSTRUCTION.—FLOOR BUILDING, WINCHELL SCHOOL.



Thus all students, in this graduate year, will have the opportunity to do their academic work in universities rich in equipment and resources; they will be able to pursue lines of intensive study in subjects in which they have specialized; and they will have the added advantage of the higher college degree as a result of the reconstruction of this course. All college graduates who enter upon this course will be enrolled as members of the Normal School, and they will be examined for admission to this course by the Board of Superintendents. The subjects of examination will be as follows:

MAJOR SUBJECT (one required) selected from the following:

English and American literature, French, German, Latin, Spanish, trigonometry, and analytics, biology, chemistry, physics, mediæval and modern European history, American history, economics.

MINOR SUBJECTS (two required):

(a) English composition and rhetoric; and (b) any one of the following:

Economics, mediæval and modern history, American history, French, German, Latin, Spanish, algebra, geometry, biology, chemistry, physics.

(A subject taken as a major may not also be taken as a minor.)

Those candidates who pass this admission examination will at once enter upon a semester of training in the elementary, intermediate and high schools of Boston, under the direction of the Department of Practice and Training. The first month of this semester will be spent by each student in one class in the elementary schools where the candidate grows, through directed teaching and observation, in an understanding of the need of method in presentation, a knowledge of the elements of class room mechanics, an appreciation of individual differences and their place in class participation, and the elements of lesson planning. These preliminaries are worked out in classes where method of approach to the child and the subject is the *sine qua non* of the day's work. Here the problem is simplified for the young college student as he takes his first faltering steps, because of the confidence and respect of the younger children and the constructive criticism of class room teachers and supervisors.

The second month will be spent in a class room of the junior high school. The student has grown through a knowledge of his assets and limitations, and begins the work with power which has come from the directed experience of the previous

month. During this time he will be helped to the organization of his material for effective presentation, to a study of value and possibilities in questions and to a deeper study of individual differences as a factor in the presentation of subject-matter, in individual discipline, and in class management.

After these two months of most carefully supervised work, with one session each week spent in conference in which the practice of the class room is connected with sound educational principles, the graduate student will be sent into high school into the department in which he has majored. Through the coöperation of the principals and heads of departments in the high schools this period becomes a time of great profit to the student.

His experience with the younger children has given him a background whereby he is ready to meet all those simple difficulties which make the beginner's work so trying. He has been taught the necessity for careful preparation of his work, and his study of individual differences has made him aware of the necessity for different methods of approach. At this time his rich background of preparation in college will make itself felt; a confidence in his own power to make connections through his questions and suggestions will make his work stronger, and he will become a valuable assistant in the department in which he spends three months. His work through this time will be carefully supervised, and again he will be present at weekly conferences with the assistant superintendent in charge of all the training of these young teachers. At these conferences the problems of method and discipline which he meets will be discussed in the light of the best educational procedure.

At the end of the first semester all students who successfully complete the prescribed course in training will enter upon a second semester of related academic work either at Boston University or Boston College, according to their choice. The students enter upon this academic work with minds filled with problems which have come to them during their weeks of laboratory practice in the schools. In this semester an equivalent of eighteen hours of academic work weekly will be prescribed, to be arranged as follows:

- English composition and rhetoric;
- Principles and methods of secondary education;
- History of education;

Educational psychology, with special attention to psychology of adolescence;

Hygiene;

Statistical education.

and courses in a limited group of major subjects from which election was made at the time of the entrance examination.

The satisfactory completion of this academic work, preceded by the prescribed course in training, will satisfy the requirements for the degree of Master in Education. This degree will be accepted in lieu of two of the three years of experience in teaching required for the Intermediate or for the High School certificate for Boston service. Those who receive this degree are, by virtue thereof, eligible to take the examinations conducted by the Board of Superintendents for the Junior Assistant certificate of qualification. The details of this examination are as follows:

A candidate for the Junior Assistant certificate will be examined in the following-named subjects, with credit as indicated

	Points.
MAJOR SUBJECT (one required), selected from the following	250
(a) English and American literature.	
(b) Latin language and literature.	
(c) French language and literature.	
(d) German language and literature.	
(e) Spanish language and literature.	
(f) Trigonometry and analytics.	
(g) Physics.	
(h) Chemistry.	
(i) Biology.	
(j) Economics.	
(k) English and American history.	
MINOR SUBJECT.....	200
English composition and rhetoric.	
PERSONAL INTERVIEW.....	150
By members of Board of Superintendents.	
GENERAL SCHOLARSHIP.....	400
Teaching experience, etc.	
Total.....	1,000

Holders of the Junior Assistant certificate will be qualified for service in the intermediate and in the high schools of Boston.

College graduates who desire to train for service in the first six grades of the elementary schools may, upon successful pass-

ing of the Normal School admission examination for college graduates, be admitted to the one-year course in the Normal School as heretofore.

I am confident that this plan will bring to our high school service a group of young men and women professionally well equipped, and thoroughly awakened to the opportunities in their work.

Sincerely yours,

MARY C. MELLYN

Assistant Superintendent.

APPENDIX E.

CHANGES IN COURSE OF STUDY IN THE MECHANIC
ARTS HIGH SCHOOL.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

MY DEAR SIR,— In compliance with your request, I submit herewith a brief report concerning the changes in the course of study for the Mechanic Arts High School which became effective in September, 1919.

The Mechanic Arts High School was established in 1893. Organized as a Manual Training school, with equipment and courses based on the best practice of similar schools of earlier foundation, its membership rose rapidly from 160 in 1895 to 652 in 1902. (See the chart on page 81.) In this year the limit of capacity of the school was reached as far as the entering class was concerned and therefore by 1907 the membership had increased to but 777, the increases coming in the upper classes only. In 1908 the addition to the building became available, when the enrollments immediately shot up to 1,150 and thence rose through the succeeding years to the high-water mark of 1,506 in 1913. The graduates of these classes went out directly or after work in higher institutions into many lines of industrial, technical, professional and business endeavor where they have reflected credit upon themselves and the school by material success and civic service.

During several years previous to 1913 the School Committee, zealous that this school together with other high schools should be of service to more of those graduates of elementary schools who could not count upon further formal training than that offered by a public high school, considered the advisability of making radical changes in its curriculum. A series of studies of the school were made by special committees and individuals, culminating in one made in 1914 by Dr. C. A. Prosser, now director of the Federal Board for Vocational Education. Based upon this report a new course of study was introduced in September, 1914, and this has since been in

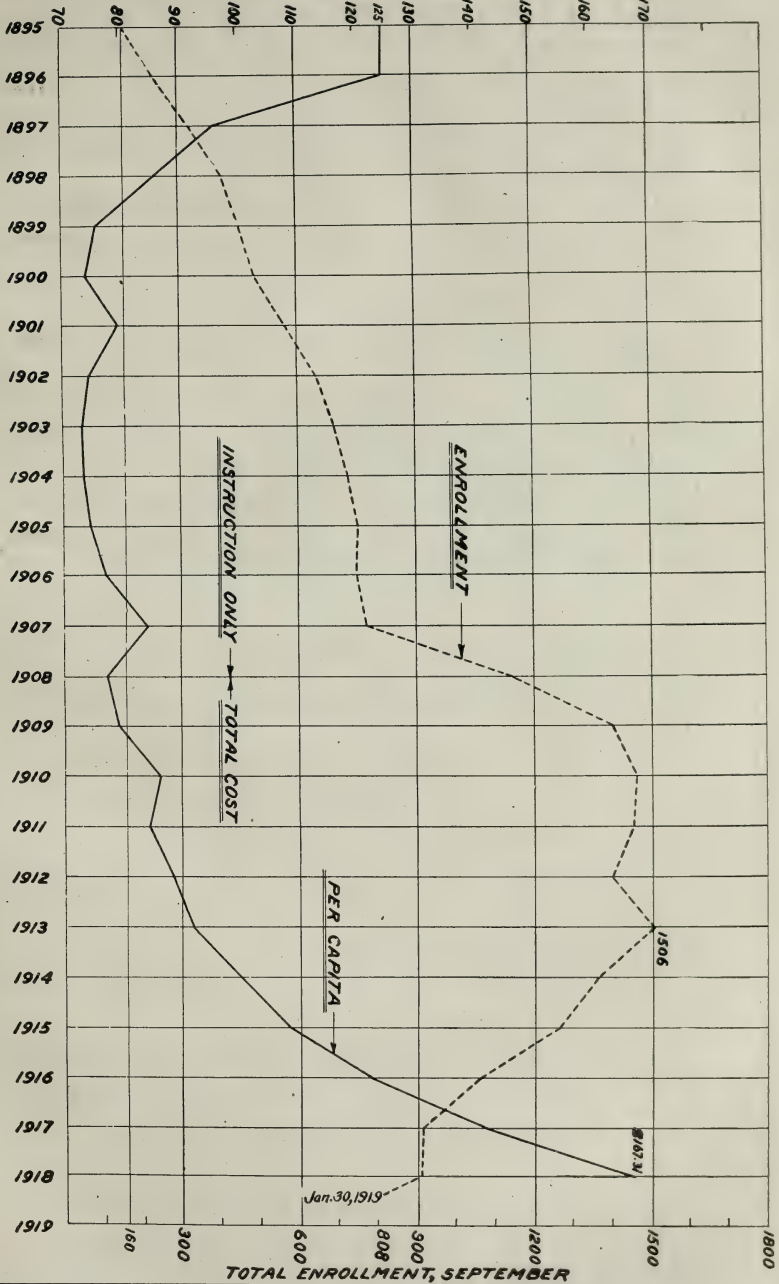
operation until September, 1919. This course of study precluded the possibility of graduates going to higher technical schools and made the shops of the school the point of departure in all instruction, practical applications becoming the dominating factors in the choice of subject matter and methods of instruction. It was felt that pupils might well prepare for technical colleges in other high schools. It was believed that a large number of boys with native mechanical aptitude, not then seeking high school training, would gladly enter a secondary school furnishing much more intensive training for specific industrial ends. It was believed that it was practicable to select such boys and direct them to the school which offered this training. It was hoped that the choice of school would thus be made more intelligently and that consequently the percentage of persistence of attendance in each class would be considerably increased.

Many inspirations and other good results have come from the operation of this course of study during the past five years, as reflected in methods, texts and use of equipment and in program arrangements, but a study of the chart on page 81 will show that the results in enrollment and expense per capita have been increasingly disappointing. Undoubtedly some of the reasons for this decreased enrollment have been the new opportunities in the Boston Trade School and the introduction of coöperative industrial courses in suburban high schools. Other causes may have been that parents and teachers hesitated to choose a high school course which closed the door of advancement to a still higher institution, limiting a student to a highly specialized form of technical education, and the fact that the course called for a long school day as compared with other high schools. In any event, not only was enrollment dropping and per capita cost mounting, but a large amount of expensive machinery was beginning to lie idle while other high schools in the city were being overcrowded. Moreover the percentage of persistence of attendance failed to improve and in some cases dropped.

Shortly after my assignment to supervision of the Mechanic Arts High School by the new superintendent, Mr. Thompson, I was directed by him as follows:

"In view of the experience of the Mechanic Arts High School with its new courses of study during the past four years,

DOLLARS PER CAPITA



Dr. E. J. T. E. H. J. Ch. W. U. I. App. 6. 1918

and in view of the world experiences during the same time with the light that they have turned on educational experiences and the questions for the future which they have raised educationally, I would request you to formulate in conference with the head master any conclusions that have been reached with regard to courses in that school and any recommendations that you would make for changes in the future.

"What I want is that we should capitalize the experiences of the past and face the possibility of the reduction of the per capita expenses in the school if this can be done without any sacrifice of educational values."

There followed a careful consideration of the history and present status of the school, including the above mentioned facts and others. Frequent conferences were held with the head master of the school, Dr. Charles W. Parmenter, with his heads of departments and with his teachers, to determine the best way of making the school more useful and less expensive while retaining all possible of good from the 1914 program of work. Several decisions were arrived at, as follows:

(a) To define the aims of the school in more liberal terms, which should include adequate preparation for still larger fields of activity in this industrial age, with more emphasis upon attainments that contribute to happy living and intelligent participation in the social and civic affairs of a democratic community.

(b) To retain all of the points of vital contact with industry that had been discovered and utilized in the new course and at the same time place more emphasis upon fundamental principles and logical relations, especially in science and mathematics.

(c) To include such electives, after the first year, as would enable those who proved to have ambition and ability to undertake more difficult work in mathematics, science and modern languages, to do the most of which they are capable, whatever their aims might be, and also make it possible for capable boys to prepare for further study in higher institutions of the same general type.

(d) To increase somewhat the size of classes.

(e) To diminish the total length of the school day by reducing the amount of time given to supervised study, thus releasing teachers for more class work.

(f) To insure more adequate use of expensive equipment.

Aside from a more economical organization, the hope was that the revision would make it clear that the school is not organized to serve one industrial, social and economic class

alone, nor to accentuate a social stratification hostile to American democracy. In harmony with the foregoing the following course was prepared:

FIRST YEAR.		Periods.
Applied mathematics, including elements of algebra		5
English		2½
General science and hygiene		2½
Civics		2½
Woodworking		10*
Drawing		2½

SECOND YEAR.			
Group A.	Periods.	Group B.	Periods.
Applied mathematics, including elements of plane geometry	5	Algebra	2½
English	2½	Plane geometry	2½
United States history, industrial and political	2½	English	2½
Applied science	2½	United States history, industrial and political	2½
Pattern making and forging	10*	French	2½
Drawing	2½	Pattern making and forging	10*
		Drawing	2½

THIRD YEAR.			
Applied mathematics, including elements of solid geometry and trigonometry	5	Plane and solid geometry	5
English	2½	English	2½
Physics	5	Physics	5
Industrial history of Europe	2½	German	2½
Machine shop practice	10*	French	2½
Drawing	2½	Machine shop practice	5*
		Drawing	2½

FOURTH YEAR.			
Principles of surveying	2½	Plane trigonometry	2½
English	2½	English	2½
Chemistry	5	Chemistry	5
Economics	2½	History and government of United States	2½
Elementary engineering	5*	Algebra	2½
Advanced laboratory or shop work	10*	German	5
Architectural drawing, machine design, or industrial design	2½	French	2½

Eighty points are required for a diploma.

*The subjects starred receive only one-half as many points as the number of periods assigned to them.

Pupils expecting to continue their education beyond the school would naturally take the subjects in Group B, but flexibility was to be preserved by the many required subjects common to the two courses and by the provision that beyond these required subjects a boy might complete his program by choosing additional subjects from either group, with the approval of the head master. Consequent on informal conferences with its members a meeting of the Advisory Committee was held on May 13, 1919, with Messrs. George E. Brock, Herman C. Bumpus and Roy Davis present. At the close of the meeting the following motion was placed upon record:

"The Advisory Committee of the Mechanic Arts High School has examined the statement of purposes and the proposed courses of study for the Mechanic Arts High School, as submitted to them by the Superintendent of Schools, and it feels assured that these are wise, expedient and in accord with the proper development of the school and recommend their adoption."

The course of study thus commended was approved by the Board of Superintendents on May 23, 1919, and adopted by the School Committee on June 2, 1919. In making public announcement of this new course the following statement was issued and it well summarizes the present purposes of the School Committee as regards this school:

This school aims to fit boys for worthy citizenship in a democracy, and for rapid advancement in many of the activities in the complex industrial order of this age.

The primary purpose of the course of study is to meet the needs of boys whose dominant interests are in science, mathematics, drawing and the mechanic arts and whose education will probably end with this school. In order, however, that the outlook of boys who may wish to carry their technical education further shall not be limited at the outset, the school offers, secondarily, in the last three years, a course that will enable good students to continue their education in such evening courses as those of the Lowell Institute School for Industrial Foremen, or in the regular courses of the best technical colleges.

While many of the subjects of study are similar to those in general high schools, and their logical development is not neglected, special emphasis is placed upon the practical applications of science, mathematics and drawing in engineering and mechanical work.

In addition, every boy is required to take courses in woodworking, patternmaking, forging and machine shop practice. The purpose of these courses is to give clear notions of good workmanship, accurate and system-

atic knowledge of the fundamental processes common to many industries and keen appreciation of the importance of mechanical activities and the value of mechanical intelligence. This training, coupled with thorough instruction in related academic subjects, appeals strongly to many boys and tends to develop the qualities required for leadership in many positions that offer great promise of successful careers. The combined experiences of the shops, drawing rooms, laboratories and class rooms, help boys to form correct judgments concerning their fitness for a given employment.

It should be noted that the Mechanic Arts High School does not perform the functions of a trade school. By specific designation, it is a *high* school and the characteristic feature of its course of study is indicated by the words *mechanic arts*. Its purpose is in accord with that of the best technical high schools recently organized. Considerable dexterity is developed by the shopwork, but provision is not made for sufficient repetition of operations to produce the skill of hand of a journeyman. Moreover, the aim of a trade school is to teach thoroughly some one trade as rapidly as the student's ability will permit. This school, on the other hand, teaches the processes that are fundamental to many trades, with a view to fitting boys for executive positions in which mechanical insight and judgment are essential to success. In many cases, the approach to such positions is through the workshop, and the training which the school gives leads to rapid advancement. Experience has shown that graduates readily find profitable employment.

For the large number who can go no further, one course provides the best equipment that a high school can give for successful careers in many forms of elementary engineering. For those who desire it, the other course opens the door to the complete engineering training of the technical colleges.

While still too early to predict, with assurance, the effect of this change of purpose, it is to be noted that the number of registrations for the fall of 1919, consequent on the announcement of the new course of study, is substantially larger than has been the rule in recent years.

In closing this report attention should be called to the hearty coöperation of the Advisory Committee, the former assistant superintendent and of the head master and all his teachers.

Respectfully submitted,

JOHN C. BRODHEAD,

Assistant Superintendent.

APPENDIX F.

REPORT OF DIRECTOR OF HOUSEHOLD SCIENCE
AND ARTS.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

MY DEAR MR. THOMPSON,— In compliance with your request for a statement of the work of the Household Science and Arts Department during the past year I respectfully submit the following:

As the materials needed for our work are foodstuffs and textiles, and the prices of these have soared so since the war began, we considered ourselves fortunate in being able to run the department at all.

During the war the department has not adhered closely to the course of study. We tried to do the best we could to broaden out and come in closer contact with the homes, so that we might be of benefit to them. Each teacher has been permitted to adapt herself to war conditions and to the needs of her district.

COOKERY.

The cookery department has been closely related to the state and civic committees of food conservation. Our department has many times been of much assistance to these committees by giving information as to the needs of different classes of people. When drives have been on for the saving of meat, fat, wheat, sugar, etc., and when on the other hand we have been urged to use more cottage cheese, butter, milk, wheat and wheat substitutes, the teachers have devoted a part of each lesson to short talks on these subjects. They have encouraged the girls to look to the saving of food in their own homes and to bring in each week, for class discussion, the amount and kinds of foods that have been saved during the week. This work has been in accordance with the pledge signed by the girls of the cookery classes at the beginning of the war. Each girl who signed the pledge, about 8,000, promised to assist her

mother to prevent waste of food in the home by prudently buying, by carefully preparing, by avoiding unnecessary waste in serving and by using up left-over food materials.

The girls were encouraged to perform some definite task at home that would be in line with suggestions offered by the State Department of Agriculture on getting the family to use more milk, butter, cottage cheese, etc.

Meetings.

A committee of the teachers has kept up with all the latest publications issued by the Federal, state and city authorities, and these bulletins and leaflets have been distributed for class use at the monthly meetings.

Experts from Amherst have given talks on the best and latest ways and experiments used for the preservation and drying of foods. Members of the State Extension Department have addressed the teachers, telling of their work throughout the state, and showing how our work could come closely in touch with theirs. The Cornell Reading Courses and Farmer's Bulletins have also been discussed at the meetings.

New Schemes Tried This Year.

With the price of fuel soaring we found that many of the children were not getting proper food to give them strength. The mothers could not prepare foods that required long cooking, such as breads, soups, stews, vegetables, etc., on account of fuel prices. As these foods are necessary for health and strength, we felt that something must be done to help out. The girls were given the privilege of preparing a family quantity in line with the day's lesson, taking it home for the noon or evening meal. The teachers announced one week ahead what the next week's lesson was to be; the girls could bring their own food materials or have the teacher furnish them, the girls paying for the amount used. The parents, the fathers even more than the mothers, were enthusiastic over this plan. They had a well-prepared and well-cooked dish with time and fuel saved. As our equipment would not permit us to let every girl in the class cook a large quantity, we were obliged to limit it to eight in each lesson. However, we were sure that every girl who desired this privilege was given the opportunity. About 8,190 family quantities for home use were cooked during the school year.

Then, too, emphasis was placed on simple home meals that would give the most food value for the least money. The menus were prepared outside, discussed in class and the best ones selected for class lessons. The menus were adapted to the different classes of people. About 1,455 of these meals were cooked in the school kitchens this year. Current prices were brought in for discussion in class.

In two of the school kitchens and one of the school homes, namely, the Bowdoin, Dillaway and Dillaway School Home, food was cooked and served to anæmic children. Almost 31,000 children were fed this year. However, this is not suitable work for the cookery department, being tried this year only as one of the war conditions. On account of the interference with class work, it should be carried on from outside and served in some room in the basement during recess period.

Industrial Junior High Section.

The household science industrial sections of the junior high aims to give these girls industrial intelligence rather than trade training and to give them a knowledge of all things pertaining to home and a deeper significance of the meaning of home. All work along home lines should be directed toward making the home attractive and should be conducted with the maximum amount of convenience and comfort, and the least amount of expense. Science applied to household management is what these girls need.

SEWING.

The sewing course of study has not been strictly followed for the last two years. We have aimed to meet home conditions and to make garments most necessary for children in different districts. Home mending lessons have been emphasized; in fact, we have taken anything sent us so that we might help the mothers with the family sewing. When a girl completed a satisfactory garment, and knew how to mend and patch well, she was permitted to take up Red Cross sewing. This was a reward of merit. All kinds of garments have been made for the Red Cross. During the past two years more than 35,652 garments have been made for the Metropolitan Red Cross Society. The Red Cross Society has given a great deal of praise to the work done by the girls in the Boston schools.

Advanced Sewing.

As the sewing work stops in the sixth grade because cookery is taken up in the seventh and eighth grades, many masters have asked for the privilege of having advanced or so-called prevocational sewing in the seventh and eighth grades in connection with cookery work. Nine schools have had advanced sewing work this year. We aim to give the girls in these classes a foundation for trade, home-making and some knowledge of textiles.

People from outside are becoming more and more interested in these classes. Orders for work have come in from all sections of the city this year, and the work has been so well done that it has been far beyond our expectations. Infants' outfits, children's rompers and dresses and household articles of all kinds have been made; also undergarments and wash dresses for the girls themselves and for other members of the family. Many of the girls made their graduation dresses; the average cost of the dresses was \$2. More than 3,200 garments have been made in these classes this school year.

HIGH SCHOOL HOUSEHOLD SCIENCE AND ARTS.

Household science and arts work has been carried on in five suburban high schools as well as in the High School of Practical Arts. On account of war conditions the work has not been advanced much during the last two years. However, a few things have been especially emphasized this year. In preparing school luncheons the girls have been led to look for wholesome food. The caloric value and the cost of each dish prepared in the class has been considered. A specialty has been made of well-balanced home meals and tray luncheons. The food cooked in these classes is sold at cost at the lunch counter, and the tray luncheons are sold to the teachers.

In the sewing and millinery classes the purpose has been to practice thrift and economy by using old materials, as the prices of textiles and millinery supplies have increased so since the war started that it had been almost impossible for many of the girls to get new materials. Old skirts, coats and dresses, whether cotton or woolen, and old millinery materials, have been cleaned and renovated for middy blouses, dresses, coats and hats for the girls themselves and for the children at home.

From time to time the girls in these classes are given shopping expeditions so that they may keep in touch with the up-to-date styles in gowns and hats, and know something of the latest textiles as to style and price. After these shopping excursions class discussion takes place.

The Art Museum this year gave a course of four lectures on the "History of Textiles and Costume" for the benefit of these classes. The lecturer also escorted the girls through the galleries showing the costumes and styles of other ages.

I could not finish this report without mentioning the splendid work of many of the teachers of this department during the influenza period. The cookery teachers worked at canteen stations in different sections of the city making and distributing wholesome foods for the sick. Some of the teachers even went into the homes to clean up and prepare food for the little children when the mother was ill. The sewing teachers, too, helped in sending out food from the canteen stations and made masks for the doctors and nurses at the Red Cross rooms.

Respectfully submitted,

JOSEPHINE MORRIS,
Director of Household Science and Arts.

APPENDIX G.

REPORT OF DIRECTOR OF MANUAL ARTS.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,— In compliance with your request for a statement of the work of the Department of Manual Arts during the past year, I respectfully submit the following:

DRAWING.

Changes in the Course of Study in the Primary and Grammar Grades.

While the aim of drawing in the primary and grammar grades remains the same as in past years, viz., "To develop an appreciation of beauty in nature and the Arts," the means of accomplishing this aim have been changed to meet the wishes of the Advisory Committee on Drawing. This committee wished to inaugurate an entirely different system of art education from that generally observed at the present time in other cities. The suggestions that were made by this committee were as follows:

1. Substitute that form of representation known as illustrative drawing for the drawing of still life, *i. e.*, geometric type solids, vase forms, plant life, etc. The reasons given for substituting illustrative drawing for the drawing of objects were that the former subject develops the observation, visual memory and imagination, and tends to encourage the use of drawing as a means of expressing ideas, which after all is most useful to the average citizen.

2. Familiarize the children with the modes of order so that they will recognize them in nature and art. Teach and draw such geometric forms and their elements as enter into the construction of art forms, *i. e.*, angles of different degrees, rectangle, triangle, circle, pentagon, hexagon, octagon, etc.

The exercises in modes of order to be worked out in the primary grades in borders and surface patterns, using geometric shapes as circles, triangles, squares, etc. Following the study

of each form of order in this way the children should observe its manifestation in nature and art.

Likewise it was suggested that the grammar grades study more complex forms of order and work them out upon geometric progressions and webs, forming patterns in areas and surfaces or fields. The method of searching in nature and art for each form of order studied is of vital importance in all grades. This is to be accomplished by means of illustrative material in the form of colored plates of plant, insect and animal life, minerals, snow crystals, etc., half-tone illustrations and photographs of architecture, painting, sculpture and the minor arts.

Following this suggestion the schools have been furnished with colored plates of nature subjects and half-tones of objects in the Museum of Fine Arts. The director plans next year to add colored plates of famous paintings and photographs of objects in the Museum of Fine Arts.

The committee believes that the above plan for the study of design will develop an intelligent appreciation of beauty in nature and art, as it is based upon a knowledge of the fundamental laws of order, and therefore is a better approach than the method generally in vogue in other cities, which consists of making designs for specific objects, as tiles, rugs, posters, costumes, book and pamphlet covers, etc., without previous knowledge of the universal laws of order. Problems in applied art should be left to the high school.

It was suggested by the committee that in the color study in the primary and grammar grades it is desirable that the children be taught to recognize first the relations of hue, value and intensity of the spectrum colors by means of exercises in making color scales, followed by analyses of beautiful color schemes in nature and in art, and finally applying color schemes to original patterns in areas and surfaces.

These suggestions of the Advisory Committee were carefully considered by the director and his assistants. While in many respects these recommendations were radically different from the generally accepted ideas upon the teaching of drawing in the primary and grammar schools in other cities, they were much in sympathy with this new viewpoint of art teaching, and desired to introduce it in the schools. Therefore the course of study was revised, and a plan of lessons was worked out by the assistants whose intimate knowledge of the children and conditions of the class room enabled them to plan a logical series of exercises. This course has been well received, and it may be

said that there is much evidence to prove that it has succeeded in arousing much interest upon the part of teachers and pupils alike. With the addition of more illustrations in nature and art, and with the teachers' increasing familiarity with the new course, the director believes that the future outlook for art instruction in this city has unlimited possibilities.

Drawing in the Ninth Grade (Intermediate Schools).

In 1918 the director recommended that drawing be required in the ninth grade. This request was granted by the Board of Superintendents, with the understanding that the course should aim to develop art appreciation. The director outlined a course the nature of which was largely in the form of talks upon architecture, sculpture, painting and the minor arts, which were given by the director and his assistants, assisted by the special drawing teachers. The modes of order and elements of color were studied first, following which the pupils analyzed half-tone illustrations of objects in the Museum of Fine Arts, as well as examples of public buildings, statuary in the schools and illustrations brought from home.

The classes visited the Museum of Fine Arts accompanied by their drawing teacher and the assistant in Manual Arts, who skillfully directed the pupils' observation and encouraged them to make sketches of such objects as illustrated the various modes of order in design and color. In many instances the Museum docent coöperated in these visits by giving a short description of the historical significance of the objects under observation.

The director believes that this phase of the ninth-year art study has awakened an active interest in the Museum and the art world, and should be encouraged in the future. Many personal letters received by the director from pupils bear testimony to the interest that the course in art appreciation has awakened.

Drawing in the High School.

The director has encouraged the high school teachers of drawing to place more emphasis upon truthful representation of form with the lead pencil, and discouraged careless drawing which has often obtained in the endeavor to secure impressions of light and shade with color. The result has been beneficial to pupils and teachers alike in that more careful observation and better drawing has developed with the knowledge that poor drawing can never be excused by prettiness of effect.

In the study of design there has been less attempt to do pre-

tentious problems. To a large extent the making of posters has been discouraged as the difficulties involved are beyond the average high school student, and the amount of time occupied in completing one problem appears to be out of proportion to the benefits derived. Talented pupils have been advised to do such work out of school, bringing the design to the teacher for criticism.

During the war period some of the schools, notably the Girls' High School of Practical Arts, successfully competed in Government poster contests.

High School Vocational Art Course.

The vocational art class at the Museum of Fine Arts enrolled nineteen pupils this year, all of whom received the benefit of art instruction at the Museum free of charge. The recent exhibition of this class indicated an improvement over the work of last year. Many of the most talented pupils have continued to study in the Museum School after completing their course in the vocational art class. Some of them have won free scholarships in these advanced classes.

Drawing in the Normal School.

The recent exhibition of drawing in the Boston Normal School was highly commended by members of the Advisory Committee on Drawing. The course of study has been revised this year to keep it in harmony with that of the primary and grammar grades. The director believes that the recent appointment of one of the manual arts assistants to the head of the Drawing Department in this school, enabling her to give undivided attention to the work, will assist greatly in dignifying the subject, and making possible continued progress in the future.

The past year has been a period of transition. Grade teachers and assistants have worked with great energy, many of the former having entered the afternoon improvement classes to enable them to become more familiar with the new course of study. Such a spirit as all have shown is most praiseworthy.

The Advisory Committee also has been generous of time, and the director and his staff feel grateful for the help that they have received from these public spirited people.

Respectfully submitted,

THEODORE M. DILLAWAY,
Director of Manual Arts.

APPENDIX H.

REPORT OF DIRECTOR OF MEDICAL INSPECTION.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR MR. THOMPSON,—I have the honor to submit the following report of the Medical Inspection Department for the school year 1918-19:

In September, 1918, an epidemic of influenza appeared, the greatest calamity that has ever visited our city. During the two months, September and October, 4,023 persons succumbed to the disease. Of this number 211 were children between five and fifteen years. Owing to the number of children and teachers absent on account of influenza or illness in the family, and the demoralized condition of the community, schools were closed by order of the School Committee on September 25, two days before the Governor's proclamation to close schools, theaters, etc. The Boston schools remained closed until October 21.

The report on influenza from the Washington District, with a total enrollment of 1,677 pupils, illustrates the prevalence in the city proper:

Pupils sick.....	485
Pupils died.....	2
Children not of school age sick.....	215
Children not of school age died.....	10
Mothers sick.....	141
Mothers died.....	8
Fathers sick.....	89
Fathers died.....	6
Total sick.....	930
Total died.....	26

The director of medical inspection had charge of the Emergency Hospital at St. John's Seminary, Brighton, during the epidemic and remained on duty at that institution for twenty-

two days. For fourteen days he had the assistance of school nurses. Their work was faithful and efficient and he wishes to officially record his appreciation of this service.

Eleven cases of smallpox were reported to the Health Department between April 1 and June 1, 1919. The Medical Inspection Department did its share in preventing an epidemic of this disease by its careful examination of pupils to discover the unvaccinated and enforce the law on vaccination. Principals, teachers and nurses coöperated, and with few exceptions the parents gave them hearty support.

Extraordinary effort has been made by this department to combat the conditions causing malnutrition. The increase in the number of cases over previous years may be due to the fact that people have not fully adjusted themselves to the high cost of living; that influenza has left many children in a debilitated state, rendering them more susceptible to the causes of undernourishment. The school physicians and nurses have put forth every effort to instruct parents and children on the causes, prevention and cure of the condition.

All children with malnutrition have been under the special care of the school physicians and nurses. They have been weighed and measured every month, special records kept of height and weight, and practical assistance given in the way of organizing a system of school lunches. This lunch system is carried on to a greater extent in the North and West Ends, where about two hundred and fifty children receive lunch daily in each district. The children bear the expense of these lunches.

Open-air classes are being conducted along more extensive lines. During the past year there were sixteen classes in operation; the previous year, fourteen. Nearly all were receiving daily lunches, prepared by an open-air class attendant and paid for by the children. The following is a list of classes:

Abraham Lincoln.....	1
Bowditch.....	1
Bowdoin.....	1
Dwight.....	1
Hancock.....	2
Lowell.....	1
Norcross.....	2
Quincy.....	3
Wells.....	2
Washington.....	2

Application has been made for two new classes, beginning September, 1919, one in the Norcross and one in the Bowdoin District.

The advantages of these classes are so evident that some principals are anxious to have a second or even a third open-air class in order to continue the health training of this type of pupil as long as possible.

Reports on defects in sanitation in schools, seating adjustments, etc., have been reported to the Superintendent from time to time and prompt action has been taken thereon.

New adjustable furniture is greatly needed in many schools, and it is recommended that the old desks and chairs be replaced by modern furniture as soon as practicable.

During the past school year fifteen lectures on dental hygiene, three of which were in high schools, have been given by the members of the Massachusetts Dental Hygiene Council. The lectures were illustrated by lantern slides. It is recommended that principals avail themselves of this opportunity for the instruction of children on this subject.

The neurological clinic at Forsyth Dental Infirmary has been continued this year under the direction of Dr. Edward A. Tracy, school physician. This clinic is for the diagnosis and treatment of epilepsy in school children. Many children are referred to this clinic by school physicians, teachers and nurses.

Much literature has been distributed to school physicians, nurses, teachers and pupils on subjects pertaining to general hygiene, prevention of disease, value of food, value of fresh air, etc.

Nine school physicians have served with the colors and five have returned and have been assigned to school duties.

The Forsyth Dental Infirmary has been continuing its great work. In June a circular was sent by the director of the Infirmary to all principals, urging them to have children attend the clinic during the summer months. Reservations have been made for all eligible children up to the first of September.

It is very satisfactory to note the coöperation of the out-patient departments of the various hospitals. This spring a new out-patient clinic was organized by the Salvation Army. While the facilities of the clinic are not yet ample to care for a great number of children, much work has been done in the line of dental and optical treatment.

The weighing and measuring of children, commenced in

September, 1909, at the suggestion of Dr. William T. Porter and by order of the School Committee, was completed in June, 1919. All records have been turned over to Doctor Porter for the compilation of statistics.

A course of instruction on first aid in illness and injury has been approved by the Board of Superintendents for elementary and high schools.

The Health Department and the Department of Medical Inspection have been coöperating in the matter of tuberculosis. The daily health bulletin of the Health Department is forwarded to this office, children of school age are referred to school physicians for investigation and physical examination, and the case followed up. Records are on file in this office on all such cases, showing diagnosis, treatment recommended, etc.

Two temporary school physicians have been assigned to duty in the summer review schools. A detailed report of this work will be forwarded to the Superintendent in September.

I am inclosing the following reports on various branches of the work of this department:

Comparative statistics on physical examinations for four years.

Exclusions by school physicians for the months of February, March, April, 1919.

Comparative statistics on vision and hearing from 1909 to 1919.

Sanitation.

Comparative statistics on physical examination of applicants for employment certificates.

Report on cases of tuberculosis reported to the Health Department and referred to the Department of Medical Inspection for investigation.

Report of Nursing Division for 1918-19.

Respectfully submitted,

WILLIAM H. DEVINE,

Director of Medical Inspection.

Comparative Statistics on Physical Examinations of Pupils of the Boston Public Schools from December 1, 1915, to June 30, 1919.

	1915-16.	1916-17.	1917-18.	1918-19.
Total number pupils examined.....	99,862	104,287	104,762	100,564
Total number without defects.....	30,781	38,318	43,128	57,226
Total number with defects.....	69,081	65,969	61,634	43,328
DEFECTS AS FOLLOWS:				
Defective nasal breathing:				
Anterior.....	1,292	1,297	1,108	826
Posterior.....	5,966	5,282	4,975	5,338
Hypertrophied tonsils.....	18,444	14,806	14,037	12,734
Defective palate.....	351	169	121	65
Cervical glands.....	18,841	7,746	7,201	4,777
Pulmonary disease:				
Tubercular.....	44	22	28	15
Arrested tubercular.....			5	
Nontubercular.....	683	453	456	516
Doubtful.....		1		
Cardiac disease:				
Organic.....	1,330	1,406	1,624	1,572
Functional.....	1,668	1,716	1,864	2,209
Nervous disease:				
Organic.....	74	48	46	26
Functional.....	221	179	138	149
Chorea.....	43	23	33	14
Orthopedic defects:				
Tubercular.....	88	76	63	51
Nontubercular.....	1,698	1,770	1,774	2,221
Skin.....	3,071	2,978	2,308	2,007
Rickets.....	383	326	284	132
Malnutrition.....	2,110	1,712	2,087	2,359
Mental deficiency.....	431	448	627	558
Totals.....	56,738	40,458	38,779	35,599
Defective teeth.....	56,750*	55,638*	50,507	44,531
Grand totals.....	113,488	96,096	89,286	80,130

* During the year 1915-16, and from October 1, 1916, to January 1, 1917, defective teeth were classed as primary and secondary. In some instances, if a pupil had defective primary and defective secondary teeth, it was recorded as two defects instead of one. In order to avoid duplication of defects it was thought advisable to record defective teeth as one defect without regard to whether they were primary or secondary. This method was adopted commencing January 1, 1917, and precludes comparison for the two years.

**Exclusions Reported by School Physicians from February 1 to
May 1, 1919, for Contagious Diseases or Exposure Thereto.**

Pulmonary tuberculosis	1
Diphtheria	4
Diphtheria *	22
Scarlet fever	6
Scarlet fever *	5
Measles	2
German measles	3
German measles *	1
Chicken pox	127
Whooping cough	6
Mumps	71
Mumps *	2
Acute tonsilitis	194
Influenza	33
Influenza *	5
Pediculosis	430
Acute or purulent conjunctivitis	104
Ringworm	27
Scabies	37
Impetigo	82
Other causes	284
Exposure to disease	228
Total number of exclusions	1,674

**Sanitary Defects, Etc., Reported to the Director of Medical
Inspection for Correction, School Year 1918-19.**

Defective heating in schools	7
Inspection of buildings by school physicians	5
Defective drains outside school buildings	3
Defective toilets, impure air	3
Depressions in school yard where water collects	1
Adjustment of seats	1
Guarding of machinery in manual training room	1
Rooms unsuitable for school purposes	1
Recommendations for new desks and chairs (adjustable)	1
Matters referred to Health Department	1
Other defects	2
Total number of defects reported	26

* Diagnosis uncertain.

**Report on Physical Examinations of Applicants for Employment Certificates,
November, 1915, to June 30, 1919.**

	November, 1915, to August 31, 1916.	September, 1916, to August 31, 1917.	September, 1917, to June 30, 1918.	July, 1918, to June 30, 1919.
Number of children examined.....	10,174	17,577	16,722	19,810
Boys.....	6,121	10,785	9,585	10,725
Girls.....	4,053	6,792	7,137	9,085
Number of children without defects..	4,986	8,041	7,116	9,064
Number of children with defects.....	5,188	9,536	9,606	10,746
Total number of defects.....	6,663	11,846	12,006	13,239
Number of children recommended for certificates.....	9,969	17,103	16,088	19,470
Number of children not recommended for certificates.....	205	474	634	340

**Seventy-five Children of School Age Were Reported by the Health
Department as Having Tuberculosis. Each Case Has Been
Investigated by School Physicians and Nurses, and Summary
Report Is as Follows:**

Number died	3
Number excluded from school	1
Number in school (under treatment)	6
Number in school (O. K.)	10
Number at home (under treatment)	5
Number not attending any school (working, etc.)	7
Number admitted to sanatorium	18
Number on waiting list for Westfield	3
Number attending parochial schools	7
Number not located, moved away	15
Total	75

Summary of Hearing and Vision Testing, 1907 to 1919.

	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	Totals.
Number of pupils tested in vision.....	83,909	82,255	82,954	84,058	84,747	83,075	87,493	89,508	91,326	92,552	89,108	87,286	85,682	1,123,953
Number of pupils normal in vision.....	57,474	62,532	64,116	66,755	71,902	70,587	74,912	78,436	80,287	80,653	78,742	77,099	75,864	
Number of pupils defective in vision.....	26,435	19,723	18,838	17,303	12,845	12,488	12,581	11,070	11,039	11,899	10,366	10,187	9,818	
Per cent of defective vision.....	31.5	23.97	22.70	20.58	15.15	15.03	14.37	12.36	12.08	12.86	11.63	11.6	11.46	1,130,893
Number of pupils tested in hearing.....	83,909	82,265	82,944	85,343	86,055	83,075	88,788	91,529	93,024	92,415	88,896	87,231	85,419	
Number of pupils normal in hearing.....	77,080	75,926	78,815	80,569	82,650	79,806*	85,564	89,160	90,486	89,834	87,331	85,726	83,903	
Number of pupils defective in hearing.....	6,829	6,329	4,129	4,774	3,405	3,269	3,224	2,469	2,538	2,581	1,565	1,505	1,516	
Per cent of defective hearing.....	8.13	7.69	4.94	5.39	3.09	3.09	3.63	2.7	2.8	2.79	1.76	1.03	1.77	
Number of pupils wearing glasses.....	.....	.....	8,535	6,831	6,385	7,673	5,950	6,027	5,754	5,941	6,036	6,158	5,594
Number of pupils normal in vision with glasses.....	5,190	2,865	3,614	4,776	3,360	3,569	3,309	3,318	3,580	3,499	3,281	
Number of pupils defective in vision with glasses.....	.....	.....	3,345	3,966	2,771	2,897	2,590	2,458	2,435	2,623	2,456	2,659	2,313
Number of pupils defective in vision not wearing glasses,	.....	.....	15,493	13,337	10,073	9,591	10,011	8,614	8,604	9,276	7,910	7,528	7,505
Number of pupils defective in both vision and hearing..	1,866	1,081	1,092	1,533	712	588	726	376	340	406	34,093
Number of pupils corrected in vision since last test....	.....	.....	5,084	3,489	3,166	3,355	2,963	2,865	2,733	2,789	2,828	2,476	2,345
Number of pupils corrected in hearing since last test....	.....	.....	1,213	875	684	644	565	487	338	354	602	555	337
														6,654

* First two grades not tested.

REPORT OF NURSING DIVISION FOR YEAR ENDING JUNE 30, 1919.

SPECIAL WORK.

Assisted school physicians with physical examinations. Notices written and sent to parents for all defective pupils.

Weighed and measured sixteen open-air classes four times a year and kept special records.

Weighed and measured all pupils thirteen years of age once a month.

Two hundred fifteen thousand two hundred ninety-five inspections for pediculosis.

Frequent inspections of pupils for suspicious symptoms before and after close of school during influenza epidemic. Fifteen school nurses volunteered for bedside nursing to the Instructive District Nursing Association during the epidemic and made 2,375 visits to homes of the sick. Eight of these nurses and twelve others later gave 223 days' nursing service at St. John's Convalescent Hospital under Doctor Devine's direction. All other nurses were either personally ill or caring for members of their own families.

Hair and skin of all children on summer review school list examined and re-examined during the month of June; all urged to keep clean.

The effort to have dental work completed in second and third grades has been continued this year. The interest of the children is increasing and progress is being made.

The banners presented by the Trustees of the Forsyth Dental Infirmary were secured by the same classes as last year, second grade in the Hancock District and third grade in the Washington District. Certificates were awarded to twenty-two other classes of all grades for having had "All Dental Work Completed." Four other classes were completed too late to secure certificates.

Special oversight given to all malnutrition cases and instruction was given to parents and pupils in regard to proper diet and hygienic measures necessary.

School nurses retested 10,250 children reported by teachers as defective vision and found 3,026 normal. They also retested 1,120 for defective hearing and found 467 normal.

REPORT ON PHYSICAL DEFECTS IN ELEMENTARY SCHOOLS.

DEFECTS.	Number.	Treated by Family Physi- cian.	Treated by Hospital.	Others.*
Defective nasal breathing:				
Anterior.....	233	33	51	149
Posterior.....	4,071	495	1,062	2,514
Hypertrophied tonsils.....	8,279	798	1,624	5,857
Defective palate.....	4		2	2
Cervical glands.....	641	125	137	379
Pulmonary disease:				
Tuberculous.....	16	3	13	
Nontuberculous.....	385	103	188	94
Cardiac disease:				
Organic.....	940	554	281	105
Functional.....	344	87	114	143
Nervous disease:				
Organic.....	20	6	13	1
Functional.....	70	34	22	14
Chorea.....	17	9	6	2
Orthopedic defects:				
Tuberculous.....	24	4	12	8
Nontuberculous.....	1,226	63	346	817
Skin.....	593	165	191	237
Rickets.....	29	6	11	12
Malnutrition.....	2,211	434	383	1,394

* Moved away, treatment promised, treatment refused, condition cleared with correction of other defects, etc.

REPORT ON VISION AND HEARING.

Defective vision in elementary schools 7,224

Vision corrected:

 By nurses 1,844

 By parents 2,231

 Total corrected 4,075

Notes given by nurses on uncorrected cases:

 Unimprovable, congenital cataract, injury, etc. 27

 Miscellaneous, defect doubtful, cannot afford treat-
 ment, etc. 612

 Pupils moved or discharged to work before treat-
 ment 320

 Pupils wearing glasses obtained previous year 285

 Glasses not recommended after examination 606

 Parents promised to attend 669

 Parents refused to attend 530

 Total 3,149

Defective hearing in elementary schools	653	
Hearing corrected:		
By nurses	153	
By parents	388	
Total corrected	—	541
Notes given by nurses on uncorrected cases:		
Unimprovable	10	
Left district	15	
Defect slight, no treatment necessary	53	
Sent to Horace Mann School	5	
Parents promised to attend	10	
Parents refuse to attend	19	
Total	—	112

REPORT ON DENTAL WORK.

Number found defective by school physicians	37,271
Number treated by private dentists	14,972
Number treated at dental clinics	13,534
Number escorted by nurses to dental clinics	8,526
Revisits	16,024

REPORT ON PRIMARY GRADES.

GRADES.	Treated by Dentist.	Treated by Hospital.	Totals.
III.....	1,620	2,591	4,211
II.....	1,433	1,688	3,121
I.....	1,510	888	2,398
Kindergarten.....	649	212	861
Totals.....	5,212	5,379	10,591

SUMMARY OF SCHOOL NURSES' REPORTS, 1918-19.

Home visits	33,435
School visits	25,085
Hospital visits	3,866
Talks on hygiene:	
In homes	7,586
In class rooms	9,070
Consultations with teachers	74,508
Consultations with pupils	135,044
Adenoids removed	968
Tonsils removed	1,066
Treatments in school	21,773
Inspections for pediculosis	215,295

PUPILS ESCORTED TO CLINICS.

CLINIC.	Number.	Revisits.
Eye.....	2,330	2,073
Ear.....	197	122
Nose and Throat.....	2,101	251
Medical.....	663	434
Surgical.....	248	146
Skin.....	209	116
Dental.....	8,526	16,024
Optician.....	1,515	
Totals.....	15,783	19,144

REPORT ON CARDIAC CASES IN ELEMENTARY DISTRICTS.

Number of organic cases found by school physicians	940
Follow-up work by nurses:	
In care of family physician	554
In care of hospital	281
Removed from city	7
Refused treatment	3
Treatment promised	86
No medical treatment necessary, general hygiene recommended	9
Total	940

REPORT ON PULMONARY CASES IN ELEMENTARY DISTRICTS.

Number of pulmonary tuberculosis cases	16
Positive	6
Negative	4
Diagnosis deferred	2
Arrested	2
Died	1
Moved to country	1
Total	16

Positive cases are excluded from school and in care of Boston Consumptives' Hospital Out-Patient Department or in Mattapan.

CONTAGIOUS DISEASES FOUND BY NURSES IN SCHOOLS AND HOMES.

DISEASE.	Schools.	Homes.
Diphtheria.....	17	5
Mumps.....	35	18
Whooping cough.....	1	
Scarlet fever.....	19	12
Chicken pox.....	112	32
Measles.....	6	10
German measles.....	3	
Pulmonary tuberculosis.....	7	2
Influenza.....	10	7
Septic throat.....	2	
Follicular tonsilitis.....	6	6
Total.....	218	92

SOCIAL WORK.

Vacations for pupils	104
Thanksgiving dinners for families	36
Christmas dinners for families	127
Free glasses for pupils	367
Shoes purchased	244
Clothing distributed to needy families	329
Families referred to church and charitable societies	66
Employment secured for men, 2; women, 43; girls, 16; boys, 5; total	66
Cash expended for food, coal and clothing	\$520 55
Tooth brushes sold at cost	3,376
Tooth powder sold at cost	1,221

Free X-ray examinations, free medicine, free admission to hospitals for all needy pupils.

Care was procured for several special cases through the efforts of the school nurses which deserve special mention, as follows:

Admitted to Cripple School	5
Admitted to Wellesley Convalescents' Home	5
Admitted to Canton School	1
Admitted to Horace Mann School	5
Admitted to House of Angel Guardian	1
Admitted to Baldwinsville	1
Admitted to Mattapan Consumptives' Hospital	2
Placed in care of State Board of Charity, Minor Wards Department	15
Admitted for operation to Children's Hospital	2
Admitted for operation to Boston Dispensary	1
Admitted for treatment (eye), Boston City Hospital	1
Referred to Society for Prevention of Cruelty to Children	12
Several referred to Commission for the Blind.	
Several escorted to Doctor Jelly for examination.	

APPENDIX I.

REPORT OF ACTING DIRECTOR JAMES T. MULROY,
EXTENDED USE OF THE PUBLIC SCHOOLS.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—Delayed much beyond the usual time of reopening by the influenza-pneumonia epidemic and further handicapped by the fear of indoor gatherings that gripped the citizens of Boston for some time after real danger of contagion had passed, the school centers were very late in getting under way. Not only have the centers survived the war, but what is more surprising, they show a big jump in attendance figures for the past year. The total attendance for the year is much greater than ever; each center shows a large increase; in fact one of the smallest centers actually doubled its attendance.

Realizing in the fall that practically all of the clubs and groups of young men and young women had disintegrated during last season, owing to the call to arms on the part of the former and to the entry of the latter into war industries of various kinds, with consequent long hours and night work, it became at once apparent that if the centers were to be of the fullest service our efforts would have to be concentrated on patriotic meetings and other hall programs, on men's gatherings, women's clubs, and on work for boys and girls. The early part of the season, then, was spent on building up these particular features of our school centers and with most satisfactory results, as may be gleaned from the following.

Frequent, enthusiastic, patriotic rallies in aid of the Victory Loan and United War Work campaigns were held in all the centers, doing much to stimulate and promote these urgent appeals for funds. Large audiences signed pledge cards for goodly amounts and in so doing contributed greatly toward putting these drives over the top. In fact, one speaker said that the largest and most responsive indoor audience he had addressed he had found in a school center. Similar support

was rendered the Hoover rallies, the Army and Navy, Victory Children, Salvation Army and Boy Scout drives when these were launched later in the year.

Heretofore our auditoriums had been regularly used but one night a week; this year, however, as part of our policy for the season, they have been occupied every night the centers were open; frequently extra sessions were held, so popular had center halls become during the course of the year. Always well filled, on special occasions these spacious auditoriums were crowded, standing room being at a premium on more than one occasion. Italian, French, Jewish, Armenian nights and other gatherings of foreign-born folk, "Welcome Home" nights to over-seas boys, community meetings on fares and zones by "L" Trustees, forums, concerts, lectures, entertainments, church and charity benefits; fathers' and mothers' and family gatherings; receptions to the Governor and to other city, state and national officials and to candidates for public office; War Service Unit programs, stereopticon talks, motion pictures, debates and mass meetings of various kinds, all helped make each center the "People's Clubhouse," "Neighborhood Rendezvous" or "Community Capitol" — call it what you will. Community singing was introduced into all of the centers this year as a regular feature in hall programs as a means to this end.

Another advance made during the year was the organizing in one of the centers of that large element of the community that had been coming night after night to the auditorium without further participation in the life of the center, into a group called the "Auditorium Associates." From now on these people can be counted upon for much assistance in getting up and putting through hall programs, besides aiding the center in other ways.

When the centers closed for the season, club life was about normal; war-time groups had given way to peace-time clubs; old clubs had been reassembled, new ones had been formed, and the month of June saw almost as many clubs meeting in rooms as there had been before the war. Mothers' clubs, Boy and Girl Scout Troops, orchestras, choral clubs, junior city councils, parliamentary law, debating and dramatic clubs, home dressmaking, millinery and embroidery, preparedness and Red Cross clubs, boys' and girls' clubs, lodge meetings, teachers' conferences, parochial and public school graduate

clubs, a Hebrew School, suppers, whist parties, food demonstrations, Girls' City Club and American Legions — these are the groups that have used the schoolrooms during the past year, thus serving all ages and classes of people.

The biggest addition of the season, undoubtedly, to the list of center groups was the accession of the well-known "Trade Union College." Organized labor adopted the community center program many years ago and has always consistently stood back of it, so what was more natural or to be expected than the action of the Boston Central Labor Union in the early spring when it chose a school center as the best place for its newest enterprise, "The Trade Union College"? This college was established "in order to make directly accessible to working men and working women the study of subjects which will further the progress of organized labor. The aim of the Trade Union College is in accordance with the following statement in the reconstruction program of the American Federation of Labor: 'Education must not stifle thought and inquiry, but must awaken the mind to the application of natural laws and to a conception of independence and progress.'"

Another forward step made in the centers was the increased financial support secured from the people themselves; also the large amount of unpaid service enlisted. This extra money was raised by the center folks to meet janitor overtime charges, leaders' and helpers' fees, printing and similar items of expense. Volunteer service this past season has been especially easy to obtain. Many persons in each center have given most generously of their time and talents; then, too, paid workers have again and again served gratis. In truth much of the fine showing made by the centers has been due in a great measure to this fine spirit of altruism on the part of all.

The Citizens' Advisory Boards have been of invaluable assistance in a monetary way — two of their number this year donating much needed trophies for an annual prize debate.

The great work of Americanization, the breaking down of racial, religious and social barriers and the blending of the best ideals of the old world and the new, always has been and ever will be the chief business of the Boston school centers.

This year, upon the invitation of this department, Scout officials established old troops and formed new troops in many of the schoolhouses of Boston at the expense of our funds. On this account, then, Scouting in this city has reached a growth

heretofore unattainable, with new troops organized and old troops better and more satisfactorily housed in buildings truly democratic — the public schools.

Occasionally members of the regular teaching corps have provided entertainments for center gatherings, and just as often center workers have put their time and center equipment at the disposal of principals and teachers, now and then gaining pupils for the evening and immigrant schools, and also providing orchestra music for graduation exercises; the management of one center doing an especially good bit of work in financing and conducting a reception to the head master and teachers of one of the high schools, to which parents of the pupils came in large numbers. "Coöperation," the watchword of the Boston school centers, was practised this year in all transactions between the day schools, the evening schools and the Department, of the Extended Use of Public Schools.

Respectfully submitted,

JAMES T. MULROY,

Acting Director Extended Use of the Public Schools.





ANNUAL REPORT OF SCHOOL COMMITTEE

CITY OF BOSTON, 1918





REPORT.

Among the duties imposed by law upon the School Committee is that of making an annual report intended, in the quaint language of an early statute, "for the use of inhabitants." The writing of a school report that will be read by the inhabitants is a task beyond the power of any ordinary school committee. It was said of Dean Swift, the famous writer of a bygone age, that he could write entertainingly of a broomstick, but it is probable that his capabilities would not have extended to the point of being able to write entertainingly of a public school system.

The usual annual report of a school committee is generally pretty dry reading, and consequently it is not read. It has been said that of the making of books there is no end, and it may with equal truth be observed that of the accumulation of statistics there is no limit. Official reports too often contain such a mass of statistical data as to repel rather than to attract examination. Such reports benefit the printer but no one else — certainly not the inhabitants.

The annual reports of the Superintendent usually contain full and complete statements of the changes and developments of the public school system for the period covered by each such report. The annual reports of the Business Agent, which are models of accuracy and detail, and which have received widespread approval throughout the country, afford full information on the financial aspects of the school system and enable those interested to inform themselves of practically every detail of its receipts and expenditures.

The field that can be covered by a school committee

report is, therefore, somewhat narrow if duplication is to be avoided, but nevertheless there remain some points to which public attention may properly be directed and which may profitably and briefly be discussed to advantage.

The School Committee enjoys large authority and a freedom of action and of financial independence much greater than any other department of municipal administration. Its members are the direct representatives of the people in conducting the public school system. As such representatives they seek to meet the wishes of their fellow-citizens in the quality, character and scope of the public education that the community requires, and in performing this duty are largely governed by the advice, opinion and assistance of the professional educators whom they employ.

The purpose of the public schools is, of course, to provide education first, for the children, and secondly, for adult members of the community; but, fundamentally, it has an aim and purpose even more important; that is, to improve the quality of the citizenship in order that it may properly meet its duties and responsibilities; to cultivate right ideals, respect for law and order, and to so train those who come within the sphere of its influence that they will respect duly constituted authority, and to supplement the influence of home and church in straight thinking and right living. Failing in these essentials, the whole edifice of public education, however skillfully erected and harmoniously designed, must fail in its purpose and its conduct be of little real worth.

It is the sincere and earnest purpose of the present School Committee, as it has equally been true of its predecessors, to meet these responsibilities and to perform them to the full measure of its ability.

It therefore invites and urges the sympathy and fullest coöperation of all the citizens of Boston in its efforts to accomplish these purposes.

THE NEW SUPERINTENDENT.

The term of Doctor Dyer having expired in August, 1918, the Board elected as his successor, Mr. Frank V. Thompson, then a member of the Board of Superintendents, who entered the school system of Boston as submaster in the Chapman District, March 1, 1901, and who had been successively promoted to the ranks of junior master, South Boston High School; head master, High School of Commerce; and assistant superintendent.

Superintendent Thompson began his term of office with the hearty coöperation of the Board, his fellow officers, and the members of the teaching and supervising staff. He has thus far met the new and important responsibilities imposed upon him with intelligence, sincerity and good judgment. It would appear that his administration is likely to be one of successful and progressive achievement that will reflect credit upon himself, advance the interests of the public schools, and enable him to enjoy the confidence and respect of his associates and of the public.

RELATIONS BETWEEN THE BOARD AND ITS EMPLOYEES.

It is gratifying to be able to speak of the harmonious and satisfactory relations which now exist between the Board, its officers, and members of the teaching and supervising staff. There appears to be an increasing spirit of coöperation, a feeling of confidence, and a sympathetic attitude in the determination of the various questions which have heretofore arisen that indicates a decreasing amount of friction, and a desire to arrive at a common viewpoint that will increase efficiency and avoid a spirit of discontent.

The Board fully appreciates the support which the members of the teaching and supervising staff have thus far given to its general policies and sincerely trusts that nothing will arise in the future to disturb the happy situation that now exists.

SALARIES.

One of the most important questions to engage the attention of the Board and, from the point of view of the individuals concerned, of immediate and vital interest has been the matter of salaries.

The Board has recognized the justice of the claim made for increased compensation by practically all the members of its teaching and supervising staff. Not only was the salary schedule too low to attract desirable teachers into the service, but the situation of those already employed, particularly in the lower paid ranks, was rapidly becoming one of increasing hardship, and in some cases almost of distress.

The operation of the State Income Tax Law contributed to the gravity of the situation to a very large degree. For the year covered by this report the School Committee lost its usual proportion of the total amount available for all city departments to a remarkable extent. First, because of the decrease in the valuation upon which the appropriations are based; and second, because of the Income Tax Law. Thus the School Committee found itself faced with an actual decrease in the amount available for appropriation amounting to \$260,000, and on the other hand, urgent and meritorious claims for increases in salaries.

The situation was in some degree relieved through the application to the Legislature whereby the appropriation which the School Committee was authorized to make was increased to the extent of 17 cents upon each \$1,000 of the valuation of the city for general purposes, and to the extent of 10 cents additional in 1918; 30 cents additional in 1919, and 10 cents additional in 1920; and by certain readjustments and increases, varying from 5 per cent to 15 per cent in the salary schedule, which it was thereby enabled to make, increases which, in the judgment of the Committee, were not adequate to meet the situation created by the extraordinary time through which the world was then passing and from which it has not yet emerged.

The School Committee is, of course, limited in its appropriations by the Legislature and cannot increase salaries beyond the limit which the amounts at its disposal will permit. It is firmly of the opinion that its teachers should receive an adequate and living rate of compensation, sufficient for them to maintain the position in the community which their own self-respect and standing would warrant. In former years the salary schedule in effect in Boston was sufficiently above that prevailing in other cities in the state to attract and hold desirable teachers. That is no longer true. The advances in salaries elsewhere have been greater than that which Boston teachers have received, and in some instances the amounts paid are higher than Boston has thus far undertaken to give. The advantage in this respect that our teachers formerly enjoyed has, therefore, to a very considerable extent, disappeared, and we are faced with a real problem in obtaining and holding as teachers men and women of the quality which our standards require.

It would seem inevitable that further and substantial increases of salary must be made if the public school interests are not materially to suffer; and while we deplore the situation which renders the placing of a larger burden upon the taxpayers of the city necessary, we believe that the situation must be faced openly and squarely, and that public opinion will justify a substantial increase in the salaries of our public school teachers; and not only to these should such increases be given; our janitors are certainly underpaid and these remarks apply also to attendance officers, and to practically all others in the employ of the public school system.

The diminished purchasing power of a dollar must inevitably be met by increasing the number of dollars paid and received. The Committee desires to record its appreciation of the attitude of its employees in this matter of such immediate and vital concern to them, and trusts that it will be able at no distant date to further meet their claims for additional compensation.

COÖPERATION IN MANY MATTERS OF PUBLIC CONCERN.

The spirit of patriotism and the desire to coöperate in the many emergencies that arose during the year on the part of the employees in the public school system deserve commendation in no uncertain terms.

A very large number of men teachers, so large in fact as to seriously hamper the work of the schools, in some respects, entered the military, naval or other service of the country with a devotion to patriotic ideals beyond all praise. Some of them gave their lives to the service of their country and leave behind them an imperishable memory of courage and self-sacrifice that will prove an inspiration to their successors for many years to come.

Pupils and teachers united to show the real spirit of patriotism by sacrifice and hard work which resulted in substantial achievement in Red Cross, War Savings Stamps and other activities of this character. A fuller statement on this subject will be found contained in the report of the Superintendent.

INFLUENZA.

The crisis which arose in the fall when the influenza was epidemic and necessitated the closing of schools for a period was met by the teachers and by the school nurses in a most helpful and self-sacrificing manner, and it is a source of gratification to the Committee to feel that so many of its employees responded as promptly and effectively as they did to their responsibilities in this direction, and were able to meet the demands upon them for assistance with great advantage to the public health.

SCHOOL ACCOMMODATIONS.

Because of the limitations imposed by Federal authority, the operations of the Schoolhouse Department in providing needed additional school accommodations were largely suspended during the year, and the result has been that in a number of sections of the city adequate housing facilities are now lacking and will continue to be lacking for a considerable period.

The situation with regard to school accommodations generally is somewhat grave, not only because of the practical discontinuance of building operations during the year, but also on account of the largely increased cost of construction which has advanced by leaps and bounds so that it would appear to be imperative, if the ordinary and to be expected additions to the school plant are to be provided, that additional appropriations for that purpose must speedily be made available; otherwise the deplorable situation in this respect which has at times existed in previous years will inevitably be repeated and the children be deprived of suitable school accommodations sufficient for their needs.

REVISED RULES AND REGULATIONS.

The latest edition of the Rules and Regulations was published in 1912, since which time many and important changes in the administration of the school system have been adopted. There has been much confusion and uncertainty for a number of years as to what rules and regulations were in effect; and the members of the teaching and supervising staff have been much hampered in the discharge of their duties by uncertainty and lack of information with regard to the duties which are imposed upon them.

A revision of the general Rules and Regulations of the Board, upon a substantially new plan, is now in course of preparation, and it is hoped will be adopted early next year, which will relieve the conditions now existing and result in greater effectiveness and less uncertainty in the administration of the system as a whole.

EMERGENCY REDUCTIONS IN LENGTH OF SCHOOL YEAR.

For several years, because of unforeseen and unexpected emergencies, the length of the school term has been reduced. In 1916, because of an outbreak of infantile paralysis, the schools were closed for a period of three weeks. The following year — 1917 — an acute

shortage in coal arose and many of the schools were suspended during the winter of 1917-18 for periods ranging from one week to two months. Again, in 1918, the year covered by this report, the outbreak of influenza suspended or lead to the closing of the schools for a period of about four weeks. Therefore, for three successive years, the orderly conduct of the school term has been greatly disturbed with corresponding resultant loss to the pupils. These events could not have been foreseen, nor was it possible to avoid their effect, regrettable as it was. The Committee trusts, however, that these disturbances are now happily all of the past and that the future will permit the observance of the regular and established term without interference.

TRANSPORTATION OF SCHOOL CHILDREN ON STREET CAR LINES.

The troubles of the Boston Elevated Railway Company, which have resulted in fare increases, have borne heavily upon many of the parents of those pupils who have been obliged to rely upon street car transportation between their homes and schools. The Committee has fully appreciated this hardship and has earnestly endeavored to secure remedial legislation whereby public school pupils may enjoy a reduced rate of transportation, especially over the lines of the Boston Elevated Railway Company.

At the close of the year covered by this report, it had not succeeded in its efforts, but sufficient public attention has been given to the question to make it reasonably apparent that some remedy will be authorized by the Legislature at an early date.

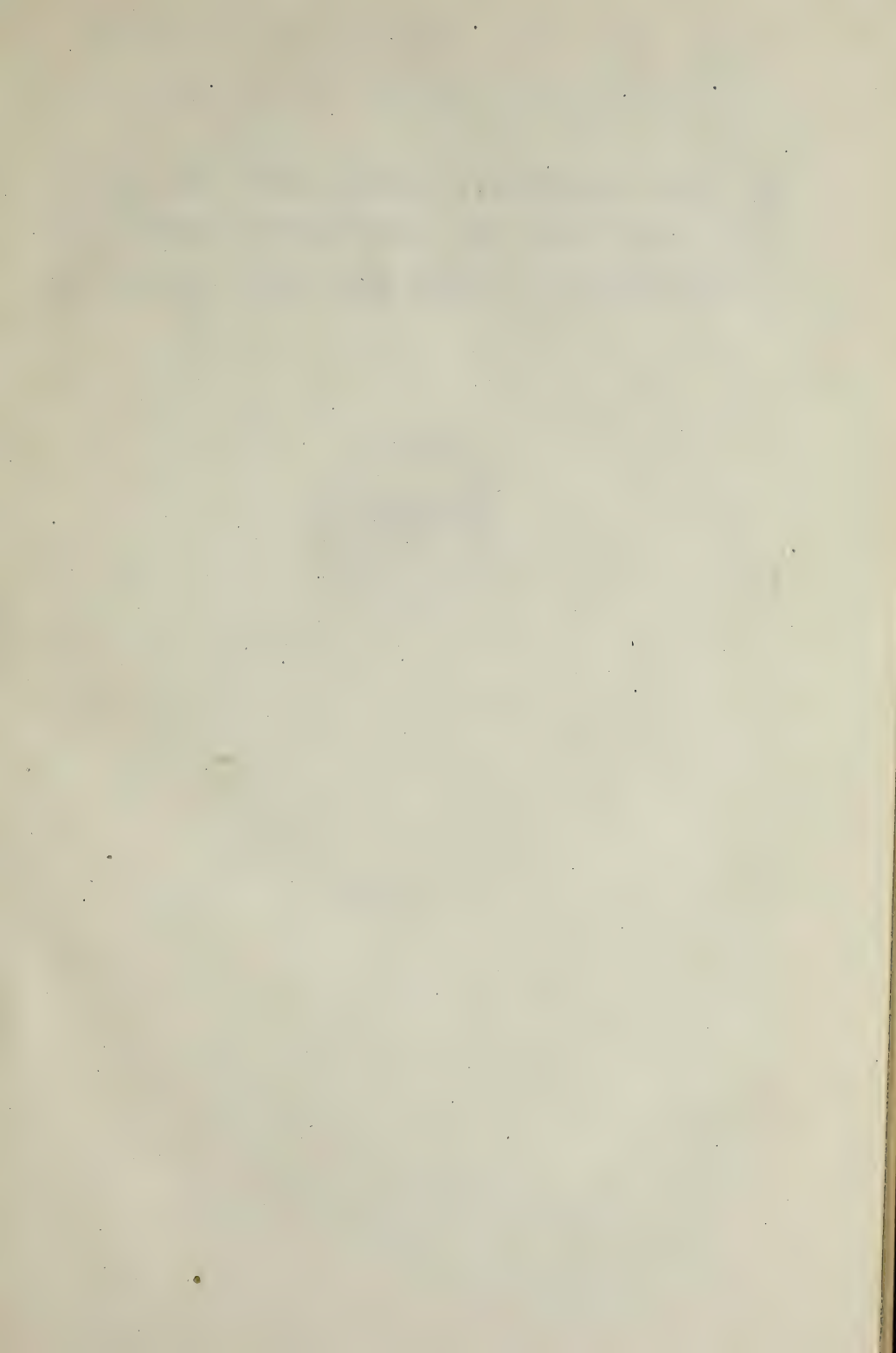
MICHAEL H. SULLIVAN, *Chairman.*

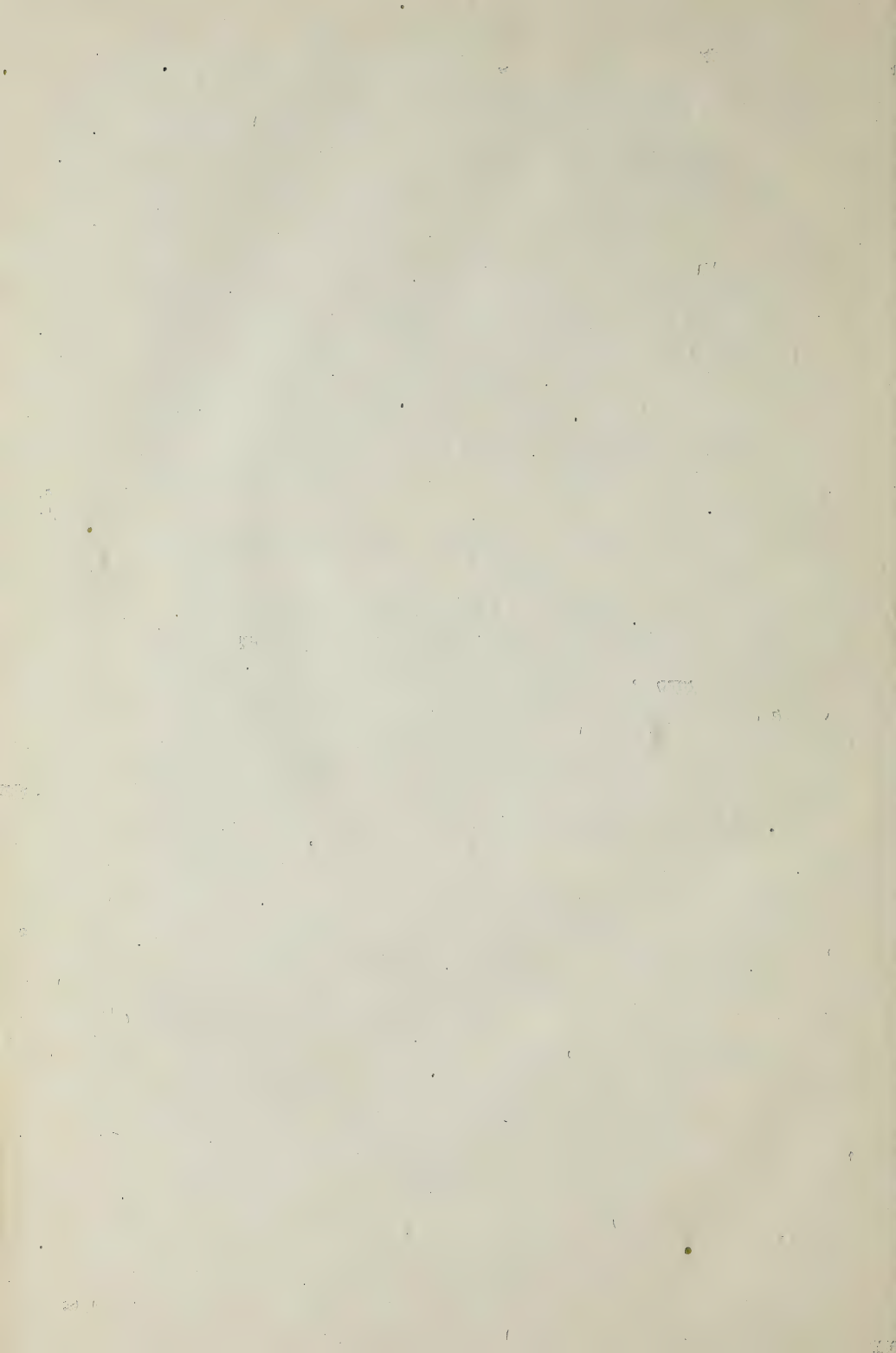
HENRY ABRAHAM.

MICHAEL H. CORCORAN.

FRANCES G. CURTIS.

RICHARD J. LANE.





SCHOOL DOCUMENT NO. 19—1919
BOSTON PUBLIC SCHOOLS

SALARIES OF PUBLIC SCHOOL TEACHERS IN CITIES OF
OVER 200,000 POPULATION IN THE UNITED STATES AND
IN SELECTED CITIES AND TOWNS IN MASSACHUSETTS



NOVEMBER, 1919

CITY OF BOSTON
PRINTING DEPARTMENT

1919

IN SCHOOL COMMITTEE, November 10, 1919.

Ordered, That the statistics recently gathered relating to the salaries of teachers in the larger cities of the United States and in certain selected cities and towns in Massachusetts, be printed as a school document, and that the edition thereof consist of three thousand (3,000) copies.

Attest:

THORNTON D. APOLLONIO,
Secretary.

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INTRODUCTION.

On September 24, 1919, the Superintendent of Schools, Frank V. Thompson, addressed a communication to superintendents of certain cities of the United States asking (a) that each superintendent verify certain information on salaries as they existed in 1917; such information was sent him in tabulated form; (b) that he furnish corresponding information for his city of September, 1919; (c) that he indicate what salary changes were contemplated to take effect on, or after January, 1920; (d) that he indicate how many increases had been put into effect since 1917, what state legislation had been passed affecting salaries, and the tax rate for all municipal and school purposes.

On October 2, 1919, a similar communication was sent to superintendents in Massachusetts.

Requests were sent to superintendents in the following cities in the United States of 200,000 population or over. The cross (X) following the name of the city indicates that the city furnished the information which is presented in Part I of this report:

Cities in United States of 200,000 Population or Over.

New York X	Newark X
Chicago X	New Orleans X
Philadelphia X	Los Angeles X
St. Louis X	Minneapolis X
Boston (included to make list complete).	Jersey City X
Cleveland X	Kansas City, Mo. . . . X
Baltimore.	Seattle.
Pittsburgh X	Indianapolis X
Detroit X	Providence X
Buffalo X	Louisville X
San Francisco X	Rochester X
Milwaukee X	St. Paul X
Cincinnati X	Denver X
	Portland, Ore. . . . X

The following is the list of cities and towns in Massachusetts of 30,000 population to which requests for information were sent. This information is presented in Part II of this report.

Cities and Towns in Massachusetts of 30,000 Population or Over.

Boston (included to make list complete).		Haverhill	X
		Malden.	
Worcester	X	Chelsea	X
Fall River	X	Newton	X
New Bedford	X	Quincy.	
Cambridge	X	Fitchburg	X
Lowell	X	Pittsfield	X
Springfield	X	Everett	X
Lynn	X	Salem	X
Lawrence	X	Taunton.	
Somerville	X	Brookline	X
Brockton	X	Medford	X
Holyoke.		Waltham.	

EXPLANATION OF TERMS.

In the elementary school four ranks of teachers only, kindergartner, assistant, rank next to principal, and principal, were considered; and in the high school three ranks, assistant, rank next to principal, and principal.

The assistant is always the regular teacher, without executive or administrative duties.

The rank next to principal includes the teacher who, in addition to his teaching, has some executive or administrative duties. He or she is variously called submaster, master's assistant, assistant principal, head assistant, supervising assistant, vice principal, and in high school may be head of a department.

The principal includes the person who is directly in charge of the administrative and executive work of the school. He or she may or may not do some teaching.

EXPLANATION OF TABLES.

The salaries of each of the foregoing ranks of teachers are tabulated in five different tables. (1) A basic

table giving the minimum, annual increase and maximum. (2) A table showing the minimum salaries only. (3) A table showing the maximum salaries only. (4) A table showing the increases in the minimum of the salary of September, 1919, over the salary of September, 1917. (5) A table showing the increase in the maximum of the salary of September, 1919, over September, 1917.

In those tables giving minimum, annual increase, and maximum salaries when the annual increase is not regular, the amount of increase is given together with the number of years in which such increase is given. Where it is not possible to determine the number of years, the lowest and highest increase is given.

In tables where the salary of men and women are both indicated the word "same" is used to indicate equal pay for both sexes. Where the schedule gave no information concerning sex the same salary for women is indicated as for men. The words "no data" are used to indicate that nothing is said in regard to the salary in question. If the returns gave no data for the rank such city is left out of the table.

Tables 11 to 15, 26 to 30, 46 to 50, and 61 to 65 deal with the rank next to principal. These tables are somewhat unsatisfactory, because, first, the name of this rank varies greatly in different cities; and, second, such a rank does not exist in some cities.

In Tables 7, 8, 42, and 43 the words in parentheses "seven years," "four years," etc., indicate the number of years necessary to reach the maximum salary.

In all summaries showing minimum salaries the highest minimum is determined by taking the largest amount paid as an initial salary. The lowest minimum is the lowest amount paid as an initial salary. The "average" is found by adding all the salaries given in the table and dividing by the total number of salaries recorded.

In all summaries showing the highest maximum, the largest maximum paid in any city is taken.

EXPLANATION OF COMPARISONS OF BOSTON.

At the close of all tables of minimum or maximum salaries, and all tables showing increases, a statement shows the relative position of Boston in relation to the cities from which returns were received. Such rankings are made as far as possible with conditions which are similar to those that exist in Boston.

In tables of kindergarten teachers the comparison of Boston is always made on the basis of the one session or half day schedule. In Tables 2, 3, 37, and 38, kindergarten teachers, Boston's rank for first assistant is determined by comparison with the higher paid kindergarten when two grades are given. When only one salary is given it is considered as applying to both grades.

Whenever Boston's rank is indicated as "third or fourth" it means that some other city pays the same salary as is being paid in Boston.

PROPOSED INCREASES TO TAKE EFFECT AFTER
JANUARY, 1920.

Only five cities (Buffalo, Indianapolis, Milwaukee, New York, and Portland, Ore.) indicated that changes in the salary schedule have already been made to take effect in January, 1920. These changes are indicated in footnotes attached to Tables 1, 6, 11, 16, 21, 26, 31, and 36.

PART I.

SALARIES OF PUBLIC SCHOOL TEACHERS IN CITIES OF UNITED STATES OF 200,000 POPULATION OR OVER.

I.— Kindergarten Teachers.

TABLE 1.

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Minimum.	Annual Increase.	Maximum.
New York*.....	\$900	{ 0 3 yrs. \$100 3 yrs. 60 6 yrs. }	\$1,600
Philadelphia:			
Class A.....	875	20	1,000
Class B.....	1,025	20	1,125
St. Louis:			
Second assistant (half day).....	675	50	775
Second assistant (whole day).....	950	100	1,150
First assistant (half day).....	950	100	1,150
First assistant (whole day).....	1,350	50	1,500
Boston:			
Assistant (one session).....	576	96	960
First assistant (one session).....	1,032	96	1,224
Pittsburgh:			
Assistant.....	750	50	875
Teacher.....	875	50	1,200
Detroit.....	920	100	1,220
Buffalo*.....	600	100	1,200
San Francisco.....	960	{ \$240 1 yr. 24 1 yr. 60 3 yrs. 48 1 yr. 24 1 yr. }	1,476
Milwaukee*.....	780	60	1,200
Cincinnati.....	No data	100	750
Newark.....	900	50-100	1,450

* Returns show salaries of January 1, 1920, as follows:

	Minimum.	Annual Increase.	Maximum.
New York..... January 1, 1920	\$935	\$105	\$1,787
January 1, 1921	970	105	1,974
January 1, 1922	1,005	105	2,160
Buffalo..... January 1, 1920	800	100	1,600
Milwaukee..... January 1, 1920	900	60-120	1,500

Kindergarten Teachers — Continued.

TABLE 1 — *Concluded.*

	Minimum.	Annual Increase.	Maximum.
Los Angeles:			
Assistant.....	\$860	\$50	\$1,110
Director (teacher).....	1,110	15-25	1,225
Jersey City.....	900	48	1,500
Kansas City, Mo.:			
Half day.....	693	75	1,013
Whole day.....	925	75	1,400
Providence:			
One session.....	550	50	700
Two sessions.....	650	50	970
Louisville.....	700	150	1,050
Rochester.....	800	100	1,600
St. Paul.....	600	75-50	850
Denver.....	1,000	100	1,500

TABLE 2.

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Kindergarten Teacher in Each City.

Denver	\$1,000
San Francisco	960
Detroit	920
Jersey City	900
Newark	900
New York	900
Philadelphia:	
Class A	875
Class B	1,025
Los Angeles:	
Assistant	860
Director (teacher)	1,110
Rochester	800
Milwaukee	780
Pittsburgh:	
Assistant	750
Teacher	875
Louisville	700

Kindergarten Teachers — Continued.

TABLE 2 — *Concluded.*

Kansas City, Mo.:	
Half day	\$693
Whole day	925
St. Louis:	
Second assistant (half day)	675
Second assistant (whole day)	950
First assistant (half day)	950
First assistant (whole day)	1,350
Buffalo	600
St. Paul	600
Providence:	
One session	550
Two sessions	650

Highest minimum:

Assistant	\$1,000	Denver.
Director (teacher)	1,110	Los Angeles.
Average minimum	852	
Lowest minimum	550	Providence (one session).

Boston's minimum:

Assistant (one session)	560
First assistant (one session)	1,032
Boston's rank for assistant, 17th out of 18 cities.	
Boston's rank for first assistant, 2d out of 18 cities.	

TABLE 3.

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Kindergarten Teacher in Each City.

New York	\$1,600
Rochester	1,600
Denver	1,500
Jersey City	1,500
San Francisco	1,476
Newark	1,450
Detroit	1,220
Buffalo	1,200
Milwaukee	1,200
Los Angeles:	
Assistant	1,110
Director (teacher)	1,225

Kindergarten Teachers — Continued.

TABLE 3 — *Concluded.*

Kansas City, Mo.:		
Half day		\$1,013
Whole day		1,400
Louisville		1,050
Philadelphia:		
Class A		1,000
Class B		1,125
Pittsburgh:		
Assistant		875
Teacher		1,200
St. Paul		850
St. Louis:		
Second assistant (half day)		775
Second assistant (whole day)		1,150
First assistant (half day)		1,150
First assistant (whole day)		1,500
Cincinnati		750
Providence:		
One session		700
Two sessions		970
Highest maximum	\$1,600	New York.
		Rochester.
Average maximum	1,177	
Lowest maximum	700	Providence (one ses-
		sion.)
Boston's maximum:		
Assistant (one session)	960	
First assistant (one session)	1,224	
Boston's rank for assistant, 14th out of 19 cities.		
Boston's rank for first assistant, 8th out of 19 cities.		

Kindergarten Teachers — Continued.

TABLE 4.

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Kindergarten Teacher in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Jersey City.....	\$600	\$900	\$300	50
Rochester.....	500	800	300	60
Denver.....	720	1,000	280	39
Philadelphia:				
Class A.....	600	875	275	46
Class B.....	720	1,025	305	42
Pittsburgh:				
Assistant.....	500	750	250	50
Teacher.....	600	875	275	46
St. Louis:				
Half day.....	450	675	225	50
Whole day.....	700	950	250	36
Buffalo.....	400	600	200	50
Detroit.....	720	920	200	28
Louisville.....	500	700	200	40
Newark.....	700	900	200	29
Milwaukee.....	600	780	180	30
New York.....	720	900	180	25
Providence.....	450	550	100	22
St. Paul.....	500	600	100	20

Increase in minimum:

Highest	\$300	Jersey City. Rochester.
Average	225	
Lowest	100	Providence. St. Paul.
Boston's	96	

Boston's rank, 15th out of 15 cities.

Kindergarten Teachers — Concluded.

TABLE 5.

Maximum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Kindergarten Teacher in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Rochester	\$950	\$1,600	\$650	68
Buffalo	900	1,200	300	33
Denver	1,200	1,500	300	25
Jersey City	1,200	1,500	300	25
Philadelphia:				
Class A	700	1,000	300	43
Class B	800	1,125	325	41
Pittsburgh:				
Assistant	600	875	275	46
Teacher	900	1,200	300	33
Newark	1,200	1,450	250	21
St. Louis:				
Half day	900	1,150	250	28
Whole day	1,200	1,500	300	25
Louisville	850	1,050	200	24
Milwaukee	1,020	1,200	180	18
Providence	800	970	170	21
New York	1,500	1,600	100	7
Detroit	1,200	1,220	20	2

Increase in maximum:

Highest	\$650	Rochester.
Average	264	
Lowest	20	Detroit.
Boston's	192	

Boston's rank, 10th out of 14 cities.

II.— Elementary School Teachers.

TABLE 6.

(a) ASSISTANT.

(Includes all Regular Grade Teachers Without Executive or Administrative Duties.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Minimum.	Annual Increase.	Maximum.
New York: *			
Grades I-VI.....	\$900	<div>0 3 yrs.</div> <div>\$100 3 yrs.</div> <div>60 6 yrs.</div>	\$1,600
Grades VII-VIII.....	1,040	80	1,920
Chicago:			
Lower group:			
Primary grade.....	775	50	1,075
Grammar grade.....	800	50	1,100
Grade VIII.....	1,200	.....	1,200
Upper group:			
Primary grade.....	1,125	50-120	1,475
Grammar grade.....	1,150	50-120	1,500
Grade VIII.....	1,250	50-120	1,600
Philadelphia:			
Women:			
Primary:			
Class A.....	875	30	1,063
Class B.....	1,125	50	1,320
Grammar:			
Class A.....	1,000	30	1,188
Class B.....	1,250	50	1,440
Men:			
Class A.....	1,125	50	1,380
Class B.....	1,464	70	1,800
St. Louis:			
Second assistant.....	950	100	1,400
First assistant.....	1,350	50	1,500
Boston.....	696	96	1,368
Cleveland:			
Grades I-VI.....	900	50	1,500
Grades VII-VIII.....	1,000	75	1,800

* See footnote on page 20.

Elementary School Teachers — Continued.

TABLE 6 — Continued.

(a) Assistant — Continued.

	Minimum.	Annual Increase.	Maximum.
Pittsburgh:			
Grades I-VII.....	\$750	\$50	\$1,320
Grade VIII.....	875	50	1,440
Detroit:			
Non-college graduates.....	920	100	1,520
College graduates.....	1,000	100	1,600
Buffalo: *			
Grades I-VII.....	600	100	1,200
Grade VIII.....	650	100	1,250
San Francisco:			
Grade I.....	960	48-84	1,536
Grades II-IV.....	960	24-60	1,476
Grades V-VI.....	960	48-60	1,512
Grades VII-VIII.....	960	48-84	1,536
Milwaukee: *			
Grades I-IV.....	780	60	1,200
Grades V-VI.....	840	60	1,260
Grade VII.....	840	60	1,320
Grade VIII.....	840	60	1,380
Cincinnati:			
Non-college graduates.....	850	No data	1,600
College graduates.....	900	No data	1,600
Newark:			
Grades I-VI.....	900	50-100	1,500
Grades VII-VIII.....	1,100	100	1,800
New Orleans.....	618	No data	903
Los Angeles.....	1,100	50	1,500
Jersey City.....	900	48	1,500
Kansas City, Mo.....	925	75	1,350
Indianapolis †.....	700	No data	1,250
Providence:			
Grades I-VI.....	650	No data	970
Grade VII.....	925	No data	1,000
Grade VIII.....	1,025	No data	1,105
* See footnote on page 20.			
† Indianapolis.....September, 1920	\$800	\$100	\$1,600

Elementary School Teachers — Continued.

TABLE 6 — *Concluded.*(a) *Assistant* — Continued.

	Minimum.	Annual Increase.	Maximum.
Louisville.....	\$700	\$150	\$1,050
Rochester:			
Grades I-VI.....	800	100	1,600
Grades VII-VIII.....	1,000	100	1,800
St. Paul.....	600	75	1,000
Denver.....	1,000	100	1,500
Portland, Ore.*.....	800	100	1,300

* Returns show salaries of January 1, 1920, as follows:

	Minimum.	Annual Increase.	Maximum.
New York:			
Grades I-VI.....			
January 1, 1920	\$935	\$105	\$1,787
January 1, 1921	970	105	1,974
January 1, 1922	1,005	105	2,160
Grades VII-VIII.....			
January 1, 1920	1,143	.....	2,180
January 1, 1921	1,246	.....	2,440
January 1, 1922	1,350	150	2,700
Buffalo:			
Grades I-VII.....	800	100	1,600
Grade VIII.....	850	100	1,650
Milwaukee.....	900	60-120	1,500
Portland, Ore.....	1,200	100	1,700

TABLE 7.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Assistant in Each City.

Los Angeles (nine years)	\$1,100
Denver (five years)	1,000
San Francisco	960
St. Louis:	
Second assistant (six years)	950
First assistant (four years)	1,350
Kansas City, Mo. (eight years)	925

Elementary School Teachers — Continued.

TABLE 7 — Continued.

(a) Assistant — Continued.

Detroit:	
Non-college graduate	\$920
College graduate	1,000
Newark:	
Grades I-VI	900
Grades VII-VIII	1,100
New York:	
Grades I-VI	900
Grades VII-VIII	1,040
Cleveland:	
Grades I-VI	900
Grades VII-VIII	1,000
Jersey City (thirteen years)	900
Philadelphia:	
Women:	
Primary:	
Class A (six years)	875
Class B (five years)	1,125
Grammar:	
Class A (six years)	1,000
Class B (five years)	1,250
Men:	
Class A (six years)	1,125
Class B (five years)	1,464
Cincinnati:	
Non-college graduate	850
College graduate	900
Portland, Ore.	800
Rochester:	
Grades I-VI	800
Grades VII-VIII	1,000
Milwaukee:	
Grades I-IV (seven years)	780
Grades V-VI (seven years)	* 840
Grade VII (eight years)	* 840
Grade VIII (nine years)	* 840
Chicago:	
Lower Group:	
Primary grade (seven years)	775
Grammar grade (seven years)	800
Grade VIII (one year)	1,200
Upper Group:	
Primary grade (five years)	1,125
Grammar grade (five years)	1,150
Grade VIII (five years)	1,250

* The maximum salary for these ranks differs.

Elementary School Teachers — Continued.

TABLE 7 — Concluded.

(a) Assistant — Continued.

Pittsburgh:		
Grades I-VII	.	\$750
Grade VIII	.	875
Indianapolis	.	700
Louisville	.	700
Providence:		
Grades I-VI	.	650
Grade VII	.	925
Grade VIII	.	1,025
New Orleans	.	618
Buffalo:		
Grades I-VII (six years)	.	600
Grade VIII (six years)	.	650
St. Paul	.	600
Highest minimum	.	\$1,100
Average minimum	.	932
Lowest minimum	.	600
	Los Angeles.	
	Buffalo. (Grades	
	I-VII.)	
	St. Paul.	
Boston's minimum	696	
Boston's rank, 20th out of 24 cities.		

TABLE 8.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Assistant in Each City.

New York:		
Grades I-VI	.	\$1,600
Grades VII-VIII	.	1,920
Rochester:		
Grades I-VI	.	1,600
Grades VII-VIII	.	1,800
Cincinnati:		
Non-college graduate	.	* 1,600
College graduate	.	* 1,600
San Francisco:		
Grade I	.	1,536
Grades II-IV	.	1,476
Grades V-VI	.	1,512
Grades VII-VIII	.	1,536

* The minimum salary for these ranks differs.

Elementary School Teachers — Continued.

TABLE 8 — Continued.

(a) Assistant — Continued.

Detroit:	
Non-college graduate	\$1,520
College graduate	1,600
Newark:	
Grades I-VI	1,500
Grades VII-VIII	1,800
Cleveland:	
Grades I-VI	1,500
Grades VII-VIII	1,800
Denver (five years)	1,500
Jersey City (thirteen years)	1,500
Los Angeles (nine years)	1,500
St. Louis:	
Second assistant (six years)	1,400
First assistant (four years)	1,500
Kansas City, Mo. (eight years)	1,350
Pittsburgh:	
Grades I-VII	1,320
Grade VIII	1,440
Portland, Ore.	1,300
Indianapolis	1,250
Milwaukee:	
Grades I-IV (seven years)	1,200
Grades V-VI (seven years)	1,260
Grade VII (eight years)	1,320
Grade VIII (nine years)	1,380
Buffalo:	
Grades I-VII (six years)	1,200
Grade VIII (six years)	1,250
Chicago:	
Lower Group:	
Primary grade (seven years)	1,075
Grammar grade (seven years)	1,100
Grade VIII (one year)	1,200
Upper Group:	
Primary grade (five years)	1,475
Grammar grade (five years)	1,500
Grade VIII (five years)	1,600
Philadelphia:	
Women:	
Primary:	
Class A (six years)	1,063
Class B (five years)	1,320
Grammar:	
Class A (six years)	1,188
Class B (five years)	1,440

Elementary School Teachers — Continued.

TABLE 8 — *Concluded.*(a) *Assistant* — Continued.

Philadelphia:

Men:

	Class A (six years)		\$1,380
	Class B (five years)		1,800
Louisville			1,050
St. Paul			1,000
Providence:			
	Grades I-VI		970
	Grade VII		1,000
	Grade VIII		1,105
New Orleans			903

Highest maximum:

Grades I-VI	\$1,600	New York. Rochester. Cincinnati.
Grades VII-VIII	1,920	New York.

Average maximum . . . 1,395

Lowest maximum:

Grades I-VIII . . . 903 New Orleans.

Boston's maximum . . . 1,368

Boston's rank:

Grades I-VI, 12th out of 24 cities.

Grades VII-VIII, 16th out of 24 cities.

Elementary School Teachers — Continued.

TABLE 9.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Assistant in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Cleveland.....	\$550	\$900	\$350	64
Jersey City.....	600	900	300	50
Rochester.....	500	800	300	60
Denver.....	720	1,000	280	39
Philadelphia.....				
Women:				
Primary:				
Class A.....	600	875	275	46
Class B.....	800	1,125	325	41
Grammar:				
Class A.....	700	1,000	300	43
Class B.....	900	1,250	350	39
Men:				
Class A.....	800	1,125	325	41
Class B.....	1,120	1,464	344	31
Cincinnati.....	600	850	250	42
Pittsburgh:				
Grades I-VII.....	500	750	250	50
Grade VIII.....	600	875	275	46
St. Louis.....	700	950	250	36
Detroit.....	720	920	200	28
Louisville.....	500	700	200	40
Portland, Ore.....	600	800	200	33
Milwaukee:				
Grades I-IV.....	600	780	180	30
Grades V-VI.....	600	840	240	40
Grades VII-VIII.....	600	840	240	40
New York:				
Grades I-VI.....	720	900	180	25
Grades VII-VIII.....	760	1,040	280	37

Elementary School Teachers — Continued.

TABLE 9 — *Concluded.*

(a) Assistant — Continued.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
New Orleans.....	\$500	\$618	\$118	24
Buffalo.....	500	600	100	20
Providence.....	550	650	100	18
St. Paul.....	500	600	100	20
Chicago.....	700	775	75	11
Newark.....	900	900	0	0

Increase in minimum:

Highest \$350 Cleveland.

Average 237

Lowest (where any
increase was given) 75 Chicago.

Boston's 96

Boston's rank, 18th out of 19 cities giving increase.

One city, Newark, has given no increase since 1917; minimum
already \$900 in 1917.

TABLE 10.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or
Administrative Duties.)*Maximum Salaries in Cities of 200,000 Population or Over of September,
1919, as Compared with September, 1917, Arranged According to the
Amount of Increase of the Lowest Paid Assistant in Each City.*

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Rochester.....	\$1,000	\$1,600	\$600	60
Cincinnati.....	1,200	1,600	400	33
Detroit.....	1,200	1,520	320	27
Pittsburgh:				
Grades I-VII.....	1,000	1,320	320	32
Grade VIII.....	1,100	1,440	340	31

Elementary School Teachers — Continued.

TABLE 10 — *Concluded.*(a) *Assistant* — Continued.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Philadelphia:				
Women:				
Primary:				
Class A.	\$750	\$1,063	\$313	42
Class B.	1,000	1,320	320	32
Grammar:				
Class A.	850	1,188	338	40
Class B.	1,100	1,440	340	31
Men:				
Class A.	1,050	1,380	330	31
Class B.	1,400	1,800	400	29
Buffalo.	900	1,200	300	33
Cleveland.	1,200	1,500	300	25
Denver.	1,200	1,500	300	25
Jersey City.	1,200	1,500	300	25
Newark.	1,200	1,500	300	25
St. Louis.	1,200	1,500	300	25
Louisville.	850	1,050	200	24
Providence.	800	970	170	21
Milwaukee.	1,080	1,200	120	11
New York.	1,500	1,600	100	7
Chicago:				
Grades I-IV.	1,380	1,475	95	7
Grades V-VII.	1,380	1,500	120	8
Grades VIII.	1,380	1,600	220	16
New Orleans.	850	903	53	6
Portland, Ore.	1,300	1,300	0	0
St. Paul.	1,000	1,000	0	0

Increase in maximum:

Highest \$600 Rochester.

Average 276

Lowest (where any
increase was given) . 53 New Orleans.

Boston's 192

Boston's rank, 14th out of 18 cities giving increase.

Two cities, Portland, Ore., and St. Paul, have given no increase
since 1917.

Elementary School Teachers — Continued.

TABLE 11.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant. All do some teaching.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Sex.	Minimum.	Annual Increase.	Maximum.
New York†.....	Men.....	\$2,100	\$150	\$2,400
	Women....	Same	Same	Same
Chicago:				
Lower group.....	Men.....	1,350	{ 50 2 yrs. 60 1 yr. 120 2 yrs. }	1,350
Upper group.....	Men.....	1,400		1,750
	Women....	Same		Same
St. Louis.....	Women....	1,500	50	1,650
Boston.....	Men.....	1,500	120	2,580
	Women....	1,404	96	1,692
Cleveland.....	Men.....	1,000	50	1,600
	Women....	Same	Same	Same
Pittsburgh*.....	Men.....	1,440	100	1,840
	Women....	1,440	100	1,840
Buffalo†.....	Men.....	900	100	1,500
	Women....	Same	Same	Same
San Francisco*.....	Men.....	1,740	120	1,860
	Women....	1,740	120	1,860
Milwaukee†.....	Men.....	840	60	1,320
	Women....	Same	Same	Same
Cincinnati.....	Men.....	1,000	100	1,800
	Women....	Same	Same	Same
Newark.....	Men.....	1,500	100	2,000
	Women....	Same	Same	Same
Jersey City.....	Women....	1,356	60	1,836
Indianapolis*†.....	Men.....	No data	No data	1,450
	Women....	No data	No data	1,450
Providence.....	Men.....	1,200	No data	1,490
	Women....	1,100	No data	1,190
Rochester.....	Women....	No data	No data	1,650

* No information in salary schedule concerning sex.

† Returns show salaries of January 1, 1920, as follows:

		Minimum.	Annual Increase.	Maximum.
New York.....	January 1, 1920	\$2,334	\$100	\$2,600
	January 1, 1921	2,567	100	2,800
	January 1, 1922	2,800	100	3,000
Buffalo.....	January 1, 1920	1,100	100	1,950
Milwaukee.....	January 1, 1920	900	120	1,620
† Indianapolis.....	September, 1920	No data	No data	\$1,800

Elementary School Teachers — Continued.

TABLE 12.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant. All do some teaching.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
New York.....	\$2,100	Same
San Francisco*.....	1,740	\$1,740
Newark.....	1,500	Same
Pittsburgh*.....	1,440	1,440
Chicago:		
Lower group.....	1,350	Same
Upper group.....	1,400	Same
Providence.....	1,200	1,100
Cincinnati.....	1,000	Same
Cleveland.....	1,000	Same
Buffalo.....	900	Same
Milwaukee.....	840	Same
St. Louis.....		1,500
Jersey City.....		1,356

	Men.		Women.	
Highest minimum.....	\$2,100	New York.	\$2,100	New York.
Average minimum.....	1,315		1,325	
Lowest minimum.....	840	Milwaukee.	840	Milwaukee.
Boston's minimum.....	1,500		1,404	
Boston's rank.....	3d or 4th out of 11 cities.		6th out of 13 cities.	

* No information in salary schedule concerning sex.

Elementary School Teachers — Continued.

TABLE 13.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant. All do some teaching.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
New York.....	\$2,400	Same
Newark.....	2,000	Same
San Francisco*.....	1,860	\$1,860
Pittsburgh*.....	1,840	1,840
Cincinnati.....	1,800	Same
Cleveland.....	1,600	Same
Buffalo.....	1,500	Same
Providence.....	1,490	1,190
Indianapolis*.....	1,450	1,450
Chicago:		
Lower group.....	1,350	Same
Upper group.....	1,750	Same
Milwaukee.....	1,320	Same
Jersey City.....		1,836
Rochester.....		1,650
St. Louis.....		1,650

	Men.	Women.
Highest maximum.....	\$2,400 New York.	\$2,400 New York.
Average maximum.....	1,697	1,680
Lowest maximum.....	1,320 Milwaukee.	1,190 Providence.
Boston's maximum.....	2,580	1,692
Boston's rank.....	1st out of 12 cities.	8th out of 15 cities.

* No information in salary schedule concerning sex.

Elementary School Teachers — Continued.

TABLE 14.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All do some teaching.

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Pittsburgh *.....	\$1,100	\$1,100	\$1,440	\$1,440	\$340	\$340	31	31
Newark.....	1,400	1,400	1,500	1,500	100	100	7	7
New York.....	2,100	2,100	2,100	2,100	0	0	0	0

* No information in salary schedule concerning sex.

	Men.	Women.
Increase in minimum:		
Highest.....	\$340 Pittsburgh.	\$340 Pittsburgh.
Average.....	220	220
Lowest (where any increase was given),	100 Newark.	100 Newark.
Boston's.....	0	96
Boston's rank.....		3d out of 3 cities giving increase.

Two cities, Boston and New York, have given no increase in the minimum to men of this rank between September, 1917, and September, 1919.

One city, New York, has given no increase in the minimum to women of this rank.

Elementary School Teachers — Continued.

TABLE 15.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All do some teaching.

Maximum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Buffalo.....	\$950	\$950	\$1,500	\$1,500	\$550	\$550	58	58
Indianapolis*.....	1,100	1,100	1,450	1,450	350	350	32	32
Pittsburgh*.....	1,500	1,500	1,840	1,840	340	340	23	23
St. Louis.....		1,350		1,650		300		22
Providence.....	1,200	No data	1,490	1,190	290		24	
Cincinnati.....	1,600	1,600	1,800	1,800	200	200	13	13
Newark.....	1,800	1,800	2,000	2,000	200	200	11	11
Chicago.....	1,630	1,630	1,750	1,750	120	120	7	7
Milwaukee.....	1,260	1,260	1,320	1,320	60	60	5	5
New York.....	2,400	2,400	2,400	2,400	0	0	0	0
Jersey City.....		1,476		1,836		360		24
Rochester.....		1,050		1,650		600		57

* No information in salary schedule concerning sex.

	Men.	Women.
Increase in maximum:		
Highest.....	\$550 Buffalo.	\$600 Rochester.
Average.....	264	308
Lowest (where any increase was given).	60 Milwaukee.	60 Milwaukee.
Boston's.....	240	192
Boston's rank.....	5th out of 9 cities giving increase.	9th out of 11 cities giving increase.

One city, New York, has given no increase in the maximum of this rank between September, 1917, and September, 1919.

Elementary School Teachers — Continued.

TABLE 16.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

*Minimum, Annual Increase and Maximum Salaries of September, 1919,
Arranged According to Size of Cities.*

	Sex.	Minimum.	Annual Increase.	Maximum.
New York ¹	Men.....	\$2,540	\$240	\$3,500
	Women.....	Same	Same	Same
Chicago:				
Lower group.....	Men.....	2,000	150	2,900
Upper group.....	Men.....	3,100	150	3,750
	Women.....	Same	Same	Same
Philadelphia: *				
Teaching principal:				
1-4 divisions:				
Class A.....	Men.....	1,125	30	1,260
Class B.....	Men.....	1,310	50	1,560
5-9 divisions:				
Class A.....	Men.....	1,310	30	1,500
Class B.....	Men.....	1,560	50	1,800
Supervising principal:				
10-21 divisions.....	Men.....	1,925	100	2,310
22-33 divisions.....	Men.....	2,640	100	3,080
34 or more divisions.....	Men.....	3,080	100	3,520
Teaching principal:				
1-4 divisions:				
Class A.....	Women.....	1,125	30	1,260
Class B.....	Women.....	1,310	50	1,560
5-9 divisions:				
Class A.....	Women.....	1,310	30	1,500
Class B.....	Women.....	1,560	50	1,800
Supervising principal:				
10-21 divisions.....	Women.....	1,925	100	2,310
22-33 divisions.....	Women.....	2,640	100	3,080
34 or more divisions.....	Women.....	3,080	100	3,520
St. Louis:				
Class E (1-5 rooms).....	Men.....	1,550	50	1,650
Class D (6-9 rooms).....	Men.....	1,650	50	1,950
Class C (10-13 rooms).....	Men.....	1,850	100	2,500
Class B (14-17 rooms).....	Men.....	2,400	100	3,050
Class A (18 or more rooms).....	Men.....	2,650	150	3,625
	Women.....	Same	Same	Same
Boston.....	Men.....	2,820	120	3,540
	Women.....	Same	Same	Same
Cleveland.....	Men.....	No data	No data	2,400
	Women.....	No data	No data	Same
Pittsburgh: *				
9 or less rooms.....	Men.....	1,320	100	1,840
10-15 rooms.....	Men.....	1,955	100	2,310
16 or more rooms.....	Men.....	2,420	100	2,970
9 or less rooms.....	Women.....	1,320	100	1,840
10-15 rooms.....	Women.....	1,955	100	2,310
16 or more rooms.....	Women.....	2,420	100	2,970
Detroit:				
13 or less rooms.....	Men.....	No data	No data	2,000
14-17 rooms.....	Men.....	No data	No data	2,400
18-21 rooms.....	Men.....	No data	No data	2,800
22-27 rooms.....	Men.....	No data	No data	3,200
28 or more rooms.....	Men.....	No data	No data	3,600
	Women.....	No data	No data	Same

¹ See footnote on page 35.

* No information in salary schedule concerning sex.

Elementary School Teachers — Continued.

TABLE 16 — Continued.

(c) Principal — Continued.

	Sex.	Minimum.	Annual Increase.	Maximum.
Buffalo ¹	Men.....	\$1,800	\$100	† \$2,300
	Men.....			† 2,800
	Men.....			† 3,000
	Women.....	Same	Same	Same
San Francisco: *				
Grammar:				
Class III.....	Men.....	No data	No data	2,400
Class II.....	Men.....	No data	No data	2,580
Class I.....	Men.....	No data	No data	2,700
Primary:				
149 or less pupils.....	Women.....	No data	No data	1,620
150-400 pupils.....	Women.....	No data	No data	1,800
401-550 pupils.....	Women.....	No data	No data	2,040
551-700 pupils.....	Women.....	No data	No data	2,220
701 or more pupils.....	Women.....	No data	No data	2,400
Grammar:				
Class III.....	Women.....	No data	No data	2,400
Class II.....	Women.....	No data	No data	2,580
Class I.....	Women.....	No data	No data	2,700
Milwaukee ¹	Men.....	1,260	60	2,700
	Women.....	Same	Same	Same
Cincinnati.....	Men.....	1,200	100	3,300
	Women.....	Same	Same	Same
Newark:				
14 or less classes.....	Men.....	1,900	100	2,700
15 or more classes.....	Men.....	2,300	100	3,500
14 or less classes.....	Women.....	1,700	100	2,300
15 or more classes.....	Women.....	2,000	100	3,000
New Orleans.....		No data	No data	No data
Los Angeles: *				
2-5 rooms.....	Men.....	1,600	20	1,680
6-10 rooms.....	Men.....	1,680	60	1,920
11-17 rooms.....	Men.....	1,980	60	2,280
18 or more rooms.....	Men.....	2,400	60	2,700
2-5 rooms.....	Women.....	1,600	20	1,680
6-10 rooms.....	Women.....	1,680	60	1,920
11-17 rooms.....	Women.....	1,980	60	2,280
18 or more rooms.....	Women.....	2,400	60	2,700
Jersey City:				
Grammar.....	Men.....	2,400	200	3,700
Primary.....	Women.....	1,900	100	2,700
Kansas City, Mo: *				
Class C.....	Men.....	1,900	100	2,300
Class B.....	Men.....	2,200	100	2,600
Class A.....	Men.....	2,600	100	3,000
Class C.....	Women.....	1,900	100	2,300
Class B.....	Women.....	2,200	100	2,600
Class A.....	Women.....	2,600	100	3,000
Indianapolis: * ²				
7 rooms.....	Men.....	No data	No data	† 1,800
7 rooms.....	Women.....	No data	No data	† 1,800
Providence: *				
1 school.....	Men.....	1,200	100	1,595
3 schools.....	Men.....	1,500	100	1,885
10 or less rooms of grammar grade pupils.....	Men.....	1,900	100	2,270

¹ See footnote on page 35.² See footnote on page 35.

* No information in salary schedule concerning sex.

† Varies with the number of teachers.

‡ For each additional room up to 15 rooms add \$75. Maximum for 15 rooms, \$2,250.

Elementary School Teachers — Continued.

TABLE 16 — *Concluded.*(c) *Principal* — Continued.

	Sex.	Minimum.	Annual Increase.	Maximum.
Providence:				
11 or more rooms of grammar grade pupils.....	Men.....	\$2,200	\$100	\$2,580
1 school.....	Women.....	1,200	100	1,595
3 schools.....	Women.....	1,500	100	1,885
10 or less rooms of grammar grade pupils.....	Women.....	1,900	100	2,270
11 or more rooms of grammar grade pupils.....	Women.....	2,200	100	2,580
Louisville.....	Men.....	1,100	No data	1,700
	Women.....	Same	Same	Same
Rochester.....	Men.....	No data	No data	3,500
St. Paul.....	Men.....	No data	No data	1,800
	Women.....	No data	No data	Same
Denver.....	Men.....	1,600	No data	2,800
	Women.....	Same	Same	Same
Portland, Ore. ¹	Men.....	1,600	200	2,400

¹ Returns show salaries of January 1, 1920, as follows:

	Minimum.	Annual Increase.	Maximum.
New York..... January 1, 1920	\$2,693	.....	\$3,667
..... January 1, 1921	2,846	.....	3,834
..... January 1, 1922	3,000	\$250	4,000
Buffalo..... January 1, 1920	2,000	No data	3,400
Milwaukee..... January 1, 1920	1,620	120	3,420
Portland, Ore..... January 1, 1920	2,000	200	2,800
² Indianapolis..... September, 1920	\$1,800	No data	\$2,400

Elementary School Teachers — Continued.

TABLE 17.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Principal in Each City.

	Men.	Women.
New York.....	\$2,540	Same
Jersey City:		
Primary.....		\$1,900
Grammar.....	2,400	
Chicago:		
Lower group.....	2,000	Same
Upper group.....	3,100	Same
Kansas City, Mo.:*		
Class C.....	1,900	1,900
Class B.....	2,200	2,200
Class A.....	2,600	2,600
Newark:		
14 or less classes.....	1,900	1,700
15 or more classes.....	2,300	2,000
Buffalo.....	1,800	Same
Denver.....	1,600	Same
Portland, Ore.....	1,600	
Los Angeles:*		
2-5 rooms.....	1,600	1,600
6-10 rooms.....	1,680	1,680
11-17 rooms.....	1,980	1,980
18 or more rooms.....	2,400	2,400
St. Louis:		
Class E (1-5 rooms).....	1,550	Same
Class D (6-9 rooms).....	1,650	Same
Class C (10-13 rooms).....	1,850	Same
Class B (14-17 rooms).....	2,400	Same
Class A (18 or more rooms).....	2,650	Same

* No information in salary schedule concerning sex.

Elementary School Teachers — Continued.

TABLE 17 — *Concluded.*(c) *Principal* — Continued.

	Men.	Women.
Pittsburgh: *		
9 or less rooms.....	\$1,320	\$1,320
10-15 rooms.....	1,955	1,955
16 or more rooms.....	2,420	2,420
Milwaukee.....	1,260	Same
Cincinnati.....	1,200	Same
Providence: *		
1 school.....	1,200	1,200
3 schools.....	1,500	1,500
10 or less rooms of grammar grade pupils.....	1,900	1,900
11 or more rooms of grammar grade pupils.....	2,200	2,200
Philadelphia: *		
Teaching principal:		
1-4 divisions:		
Class A.....	1,125	1,125
Class B.....	1,310	1,310
5-9 divisions:		
Class A.....	1,310	1,310
Class B.....	1,560	1,560
Supervising principal:		
10-21 divisions.....	1,925	1,925
22-33 divisions.....	2,640	2,640
34 or more divisions.....	3,080	3,080
Louisville.....	1,100	Same

* No information in salary schedule concerning sex.

	Men.	Women.
Highest minimum.....	\$2,540 New York.	\$2,540 New York.
Average minimum.....	1,913	1,895
Lowest minimum.....	1,100 Louisville.	1,100 Louisville.
Boston's minimum.....	2,820	2,820
Boston's rank.....	1st out of 17 cities.	1st out of 16 cities.

Elementary School Teachers — Continued.

TABLE 18.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Principal in Each City.

	Men.	Women
Jersey City:		
Primary.....		\$2,700
Grammar.....	\$3,700	
New York.....	3,500	Same
Rochester.....	3,500	
Cincinnati.....	3,300	Same
Chicago:		
Lower group.....	2,900	Same
Upper group.....	3,750	Same
Denver.....	2,800	Same
Milwaukee.....	2,700	Same
Newark:		
14 or less rooms.....	2,700	2,300
15 or more rooms.....	3,500	3,000
San Francisco:		
Primary:		
149 or less pupils.....		1,620
150-400 pupils.....		1,800
401-550 pupils.....		2,040
551-700 pupils.....		2,220
701 or more pupils.....		2,400
Grammar:		
Class III.....	2,400	2,400
Class II.....	2,580	2,580
Class I.....	2,700	2,700
Cleveland.....	2,400	Same
Portland, Ore.....	2,400	
Buffalo.....	<div style="display: flex; align-items: center;"> <div style="font-size: 3em; margin-right: 5px;">{</div> <div> * 2,300 * 2,800 * 3,000 </div> </div>	Same Same Same

* Varies with the number of teachers.

Elementary School Teachers — Continued.

TABLE 18 — Continued.

(c) Principal — Continued.

	Men.	Women.
Kansas City, Mo.*		
Class C.....	\$2,300	\$2,300
Class B.....	2,600	2,600
Class A.....	3,000	3,000
Detroit:		
13 or less rooms.....	2,000	Same
14-17 rooms.....	2,400	Same
18-21 rooms.....	2,800	Same
22-27 rooms.....	3,200	Same
28 or more rooms.....	3,600	Same
Pittsburgh:*		
9 or less rooms.....	1,840	1,840
10-15 rooms.....	2,310	2,310
16 or more rooms.....	2,970	2,970
Indianapolis:*		
7 rooms.....	† 1,800	† 1,800
St. Paul.....	1,800	Same
Louisville.....	1,700	Same
Los Angeles:*		
2-5 rooms.....	1,680	1,680
6-10 rooms.....	1,920	1,920
11-17 rooms.....	2,280	2,280
18 or more rooms.....	2,700	2,700
St. Louis:		
Class E (1-5 rooms).....	1,650	Same
Class D (6-9 rooms).....	1,950	Same
Class C (10-13 rooms).....	2,500	Same
Class B (14-17 rooms).....	3,050	Same
Class A (18 or more rooms).....	3,625	Same
Providence:*		
1 school.....	1,595	1,595
3 schools.....	1,885	1,885
10 or less rooms of grammar grade pupils.....	2,270	2,270
11 or more rooms of grammar grade pupils.....	2,580	2,580

* No information in the salary schedule concerning sex.

† For each additional room up to 15 rooms add \$75, maximum, \$2,400.

Elementary School Teachers — Continued.

TABLE 18 — Concluded.

(c) Principal — Continued.

	Men.	Women.
Philadelphia: *		
Teaching Principal:		
1-4 divisions:		
Class A.....	\$1,260	\$1,260
Class B.....	1,560	1,560
5-9 divisions:		
Class A.....	1,500	1,500
Class B.....	1,800	1,800
Supervising Principal:		
10-21 divisions.....	2,310	2,310
22-33 divisions.....	3,080	3,080
34 or more divisions.....	3,520	3,520

* No information in the salary schedule concerning sex.

	Men.	Women.
Highest maximum....	\$3,750 Chicago (upper group).	\$3,750 Chicago (upper group).
Average.....	2,538	2,441
Lowest maximum.....	1,260 Philadelphia (1-4 divisions, Class A).	1,260 Philadelphia (1-4 divisions, Class A).
Boston's maximum...	3,540	3,540
Boston's rank.....	5th out of 23 cities.	4th out of 21 cities.

TABLE 19.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Principal in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
St. Louis.....	\$1,250	\$1,550	\$300	24
New York.....	2,300	2,540	240	10
Louisville.....	900	1,100	200	22

Increase in minimum:

Highest	\$300	St. Louis.
Average	247	
Lowest	200	Louisville.
Boston's	240	

Boston's rank, 2d or 3d out of 4 cities.

Elementary School Teachers — Concluded.

TABLE 20.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Principal in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Rochester.....	\$2,400	\$3,500	\$1,100	46
Detroit.....	2,700	3,600	900	33
Denver.....	2,200	2,800	600	27
Buffalo.....	2,500	3,000	500	20
Jersey City.....	3,200	3,700	500	16
St. Louis.....	3,150	3,625	475	15
Philadelphia.....	3,100	3,520	420	14
Cleveland.....	2,000	2,400	400	20
Pittsburgh:				
9 or less rooms.....	1,500	1,840	340	23
10-15 rooms.....	2,000	2,310	310	16
16 or more rooms.....	2,600	2,970	370	14
Cincinnati.....	3,000	3,300	300	10
Chicago.....	3,500	3,750	250	7
Newark.....	3,300	3,500	200	6
Louisville.....	1,550	1,700	150	10
Indianapolis.....	2,100	2,250	150	7
Providence.....	2,500	2,580	80	3
New York.....	3,500	3,500	0	0
Milwaukee.....	2,700	2,700	0	0
Portland, Ore.....	2,400	2,400	0	0
St. Paul.....	1,800	1,800	0	0
New Orleans.....	1,500	No data		

Increase in maximum:

Highest \$1,100 Rochester.

Average 414

Lowest (where any increase

was given) 80 Providence.

Boston's 120

Boston's rank, 15th out of 16 cities giving increase.

Four cities, New York, Milwaukee, Portland, Ore., and St. Paul, have given no increase since September, 1917.

III.—High School Teachers.

TABLE 21.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Sex.	Minimum.	Annual Increase.	Maximum.
New York ¹	Men.....	\$900	No data	\$2,650
	Women....	Same	No data	Same
Chicago:				
Limited certificate:				
Lower group.....	Men.....	1,200	58	1,545
Upper group †.....	Men.....	1,660	115	2,575
Upper group ‡.....	Men.....	1,603	58	2,000
Unlimited certificate:				
Lower group.....	Men.....	1,200	115	1,890
Upper group.....	Men.....	2,005	115	3,000
	Women....	Same	Same	Same
Philadelphia:				
Class A.....	Men.....	1,125	75	1,440
Class B.....	Men.....	1,560	100	1,955
Class C.....	Men.....	2,070	100	2,420
Class D (college graduate).....	Men.....	2,640	100	3,080
Class A.....	Women....	1,000	50	1,200
Class B.....	Women....	1,320	50	1,560
Class C.....	Women....	1,680	50	1,840
Class D (college graduate).....	Women....	1,897	50	2,127
St. Louis:				
Third assistant.....	Men.....	1,300	100	1,700
Second assistant.....	Men.....	1,600	100	2,150
First assistant.....	Men.....	2,050	100	2,500
Head assistant.....	Men.....	2,400	100	2,800
	Women....	Same	Same	Same
Boston.....	Men.....	1,476	144	2,772
	Women....	1,068	96	1,932
Cleveland.....	Men.....	1,200	100	2,400
	Women....	Same	Same	Same
Pittsburgh *				
Non-college graduate.....	Men.....	1,320	No data	2,185
College graduate.....	Men.....	1,320	No data	2,640
Non-college graduate.....	Women....	1,320	No data	2,185
College graduate.....	Women....	1,320	No data	2,640
Detroit:				
Third assistant.....	Men.....	1,100	{100 4 yrs. 200 4 yrs.}	2,200
Second assistant.....	Men.....	No data	No data	2,600
First assistant.....	Men.....	No data	No data	2,800
	Women....	Same	Same	Same
Buffalo ¹	Men.....	1,000	100	1,500
	Women....	Same	Same	Same
San Francisco *	Men.....	1,380	60	\$ 1,800
	Women....	1,380	60	\$ 1,800
Milwaukee ¹	Men.....	960	90	2,250
	Women....	Same	Same	Same

¹ See footnote on page 43.

* No information in salary schedule concerning sex.

† Salary of teachers of physical education, music, art, or manual training.

‡ Salary of teachers of modern languages, commercial subjects, or household arts.

§ Assistants appointed previous to September, 1919, range from \$1,680–\$2,040.

High School Teachers — Continued.

TABLE 21 — *Concluded.*

(a) Assistant — Continued.

	Sex.	Minimum.	Annual Increase.	Maximum.
Cincinnati:				
Instructor.....	Men.....	\$1,100	\$100	\$1,400
Teacher.....	Men.....	1,500	100	2,500
	Women....	Same	Same	Same
Newark.....	Men.....	1,500	100	2,800
	Women....	1,000	100	2,300
New Orleans.....	Men.....	1,193	No data	1,710
	Women....	713	No data	1,235
Los Angeles*.....	Men.....	1,400	80	2,000
	Women....	1,400	80	2,000
Jersey City.....	Men.....	1,500	100	3,000
	Women....	1,200	100	3,000
Kansas City, Mo.: *				
Group IV.....	Men.....	1,200	100	† 1,700
Group III.....	Men.....	1,700	100	† 2,000
Group II.....	Men.....	2,000	100	† 2,200
Group I.....	Men.....	2,300	100	† 2,500
Group IV.....	Women....	1,200	100	† 1,700
Group III.....	Women....	1,700	100	† 2,000
Group II.....	Women....	2,000	100	† 2,200
Group I.....	Women....	2,300	100	† 2,500
Indianapolis: * ²	Men.....	950	No data	1,975
	Women....	950	No data	1,975
Providence:				
Third assistant.....	Men.....	900	No data	1,595
Second assistant.....	Men.....	1,600	No data	1,885
First assistant.....	Men.....	1,900	No data	2,270
Third assistant.....	Women....	800	No data	1,380
Second assistant.....	Women....	1,400	No data	1,595
First assistant.....	Women....	1,600	No data	1,885
Louisville.....	Men.....	1,200	No data	2,050
	Women....	925	No data	1,500
St. Paul.....	Men.....	850	100	1,600
	Women....	Same	Same	Same
Denver.....	Men.....	1,200	100	2,400
	Women....	Same	Same	Same
Portland, Ore.*.....	Men.....	1,200	100	1,600
	Women....	1,200	100	1,600

¹ Returns show salaries of January 1, 1920, as follows:

	Minimum.	Annual Increase.	Maximum.
New York.....			
January 1, 1920.....	\$1,050	\$150	\$2,817
January 1, 1921.....	1,200	150	2,983
January 1, 1922.....	1,350	150	3,150
Buffalo.....	1,200	100	2,000
Milwaukee.....	1,110	120	2,820
² Indianapolis.....	\$1,000	\$100	\$2,200

* No information in salary schedule concerning sex.

† Maximum not to become effective until after year 1919-20.

High School Teachers — Continued.

TABLE 22.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Assistant in Each City.

	Men.	Women.
Jersey City.....	\$1,500	\$1,200
Newark.....	1,500	1,000
Los Angeles*.....	1,400	1,400
San Francisco*.....	† 1,380	† 1,380
Pittsburgh: *		
Non-college graduate.....	1,320	1,320
College graduate.....	1,320	1,320
St. Louis:		
Third assistant.....	1,300	Same
Second assistant.....	1,600	Same
First assistant.....	2,050	Same
Head assistant.....	2,400	Same
Chicago:		
Limited certificate:		
Lower group.....	1,200	Same
Upper group†.....	1,660	Same
Upper group§.....	1,603	Same
Unlimited certificate:		
Lower group.....	1,200	Same
Upper group.....	2,005	Same
Cleveland.....	1,200	Same
Denver.....	1,200	Same
Kansas City, Mo.*:		
Group IV.....	1,200	1,200
Group III.....	1,700	1,700
Group II.....	2,000	2,000
Group I.....	2,300	2,300
Louisville.....	1,200	925

* No information in salary schedule concerning sex.

† Assistants appointed previous to September, 1919, range from \$1,680–\$2,040.

‡ Salary of teachers of physical education, music, art, or manual training.

§ Salary of teachers of modern languages, commercial subjects, or household arts.

High School Teachers — Continued.

TABLE 22 — *Concluded.*(a) *Assistant* — Continued.

	Men.	Women.
Portland, Ore. *	\$1,200	\$1,200
New Orleans.....	1,193	713
Philadelphia:		
Class A.....	1,125	1,000
Class B.....	1,560	1,320
Class C.....	2,070	1,680
Class D (college graduate).....	2,640	1,897
Detroit:		
Third assistant.....	1,100	Same
Second assistant.....	No data	No data
First assistant.....	No data	No data
Cincinnati:		
Instructor.....	1,100	Same
Teacher.....	1,500	Same
Buffalo.....	1,000	Same
Milwaukee.....	960	Same
Indianapolis *	950	950
Providence:		
Third assistant.....	900	800
Second assistant.....	1,600	1,400
First assistant.....	1,900	1,600
New York.....	900	Same
St. Paul.....	850	Same

* No information in salary schedule concerning sex.

	Men.		Women.	
Highest minimum.....	\$1,500	Jersey City. Newark.	\$1,400	Los Angeles.
Average minimum.....	1,456		1,362	
Lowest minimum.....	850	St. Paul.	713	New Orleans.
Boston's minimum.....	1,476		1,068	
Boston's rank.....	3d out of 23 cities.		13th out of 23 cities.	

High School Teachers — Continued.

TABLE 23.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Assistant in Each City.

	Men.	Women.
Jersey City.....	\$3,000	\$3,000
Newark.....	2,800	2,300
New York.....	2,650	Same
Cleveland.....	2,400	Same
Denver.....	2,400	Same
Milwaukee.....	2,250	Same
Detroit:		
Third assistant.....	2,200	Same
Second assistant.....	2,600	Same
First assistant.....	2,800	Same
Pittsburgh:*		
Non-college graduate.....	2,185	2,185
College graduate.....	2,640	2,640
Louisville.....	2,050	1,500
Los Angeles*.....	2,000	2,000
Indianapolis: *.....	1,975	1,975
San Francisco*.....	† 1,800	† 1,800
New Orleans.....	1,710	1,235
Kansas City, Mo.: *		
Group IV.....	1,700	1,700
Group III.....	2,000	1,200
Group II.....	2,200	1,200
Group I.....	2,500	1,200
St. Louis:		
Third assistant.....	1,700	Same
Second assistant.....	2,150	Same
First assistant.....	2,500	Same
Head assistant.....	2,800	Same
St. Paul.....	1,600	Same

* Maximum not to become effective until after year 1919-20.

* No information in salary schedule concerning sex.

† Assistants appointed previous to September, 1919, range from \$1,680 to \$2,040.

High School Teachers — Continued.

TABLE 23 — *Concluded.*(a) *Assistant* — Continued.

	Men.	Women.
Portland, Ore.*.....	\$1,600	\$1,600
Providence:		
Third assistant.....	1,595	1,380
Second assistant.....	1,885	1,595
First assistant.....	2,270	1,885
Chicago:		
Limited certificate:		
Lower group.....	1,545	Same
Upper group†.....	2,575	Same
Upper group‡.....	2,000	Same
Unlimited certificate:		
Lower group.....	1,890	Same
Upper group.....	3,000	Same
Buffalo.....	1,500	Same
Philadelphia:		
Class A.....	1,440	1,200
Class B.....	1,955	1,560
Class C.....	2,420	1,840
Class D (college graduate).....	3,080	2,127
Cincinnati:		
Instructor.....	1,400	Same
Teacher.....	2,500	Same

* No information in salary schedule concerning sex.

† Salary of teachers of physical education, music, art, or manual training.

‡ Salary of teachers of modern languages, commercial subjects, or household arts.

	Men.	Women.
Highest maximum....	\$3,080 Philadelphia (Class D).	\$3,000 Jersey City. Chicago (unlimited certificate, upper group).
Average.....	2,177	2,065
Lowest maximum....	1,400 Cincinnati (instructor).	1,200 Philadelphia (Class A).
Boston's maximum....	2,772	1,932.
Boston's rank.....	7th out of 23 cities.	16th out of 23 cities.

High School Teachers — Continued.

TABLE 24.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Assistant in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Buffalo.....	\$600	\$600	\$1,000	\$1,000	\$400	\$400	67	67
Philadelphia:								
Class A.....	800	700	1,125	1,000	325	300	41	43
Class B.....	1,200	1,000	1,560	1,320	360	320	30	32
Class C.....	1,700	1,300	2,070	1,680	370	380	22	29
Class D.....	2,300	1,550	2,640	1,897	340	347	15	22
St. Louis.....	1,000	1,000	1,300	1,300	300	300	30	30
Detroit.....	820	820	1,100	1,100	280	280	34	34
Denver.....	1,000	1,000	1,200	1,200	200	200	20	20
Portland, Ore.*.....	1,000	1,000	1,200	1,200	200	200	20	20
Louisville.....	1,050	650	1,200	925	150	275	14	42
Milwaukee.....	840	840	960	960	120	120	14	14
Chicago.....	1,100	1,100	1,200	1,200	100	100	9	9
Cleveland.....	1,100	1,100	1,200	1,200	100	100	9	9
Cincinnati.....	1,000	1,000	1,100	1,100	100	100	10	10
New York.....	900	900	900	900	0	0	0	0
Newark.....		1,000	1,500	1,000		0		0
St. Paul.....	850	850	850	850	0	0	0	0
Jersey City.....		900		1,200		300		33
New Orleans.....		700		713		13		2
Providence.....		700		800		100		14

* No information in the salary schedule concerning sex.

High School Teachers — Continued.

TABLE 24 — Concluded.

(a) Assistant.— Continued.

	Men.	Women.
Increase in minimum:		
Highest.....	\$400 Buffalo.	\$400 Buffalo.
Average.....	239	226
Lowest (where any increase was given)	100 Chicago. Cincinnati. Cleveland.	13 New Orleans.
Boston's.....	0	96
Boston's rank.....		14th out of 15 cities giving increase.

Three cities, Boston, New York, and St. Paul, have given no increase in minimum to men since 1917.

Three cities, Newark, New York, and St. Paul, have given no increase in minimum to women since 1917.

TABLE 25.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Maximum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Assistant in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Jersey City.....	\$1,900	\$1,900	\$3,000	\$3,000	\$1,100	\$1,100	58	58
Milwaukee.....	1,620	1,620	2,250	2,250	630	630	39	39
St. Louis.....	2,400	2,400	2,800	2,800	400	400	17	17
Pittsburgh: *								
Non-college graduate.....	1,800	1,800	2,185	2,185	385	385	21	21
College graduate.....	2,300	2,300	2,640	2,640	340	340	15	15
Philadelphia:								
Class A.....	1,100	900	1,440	1,200	340	300	31	33
Class B.....	1,600	1,200	1,955	1,560	355	360	22	30
Class C.....	2,100	1,500	2,420	1,840	320	340	15	23
Class D.....	2,700	1,750	3,080	2,127	380	377	14	22

* No information in the salary schedule concerning sex.

High School Teachers — Continued.

TABLE 25 — *Concluded.*(a) *Assistant* — Continued.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Detroit.....	\$1,900	\$1,900	\$2,200	\$2,200	\$300	\$300	16	16
Buffalo.....	1,200	1,200	1,500	1,500	300	300	25	25
Cleveland.....	2,200	2,200	2,400	2,400	200	200	9	9
Cincinnati.....	2,300	2,300	2,500	2,500	200	200	9	9
Denver.....	2,200	2,200	2,400	2,400	200	200	9	9
Louisville.....	1,850	1,400	2,050	1,500	200	100	11	7
Chicago.....	2,860	2,860	3,000	3,000	140	140	5	5
Newark *.....		2,200		2,300		100		5
New York.....	2,650	2,650	2,650	2,650	0	0	0	0
Portland, Ore.*.....	1,600	1,600	1,600	1,600	0	0	0	0
St. Paul.....	1,600	1,600	1,600	1,600	0	0	0	0
New Orleans.....		1,150		1,235		85		7
Providence.....		1,800		1,885		85		5

* No information in the salary schedule concerning sex.

	Men.	Women.
Increase in maximum:		
Highest	\$1,100 Jersey City.	\$1,100 Jersey City.
Average.....	362	313
Lowest (where any increase was given),	140 Chicago.	85 New Orleans. Providence.
Boston's.....	144	168
Boston's rank.....	12th out of 13 cities giving increase.	11th out of 16 cities giving increase.

Three cities, New York, Portland, Ore., and St. Paul, have given no increase in maximum since September, 1917.

High School Teachers—Continued.

TABLE 26.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Sex.	Minimum.	Annual Increase.	Maximum.
New York †	Men	\$1,680	\$210	\$3,150
	Women	Same	Same	Same
Chicago	Men	No data	No data	3,300
	Women	No data	No data	Same
Philadelphia	Men	3,300	100	3,730
	Women	2,185	50	2,310
St. Louis	Men	2,650	No data	3,625
	Women	Same	No data	Same
Boston	Men	2,340	144	3,348
	Women	1,428	96	2,100
Cleveland	Men	No data	No data	2,800
	Women	No data	No data	Same
Detroit	Men	No data	No data	3,500
	Women	No data	No data	Same
Buffalo †	Men	2,200	100	2,700
	Women	Same	Same	Same
San Francisco *	Men	No data	No data	2,400
	Women	No data	No data	2,400
Milwaukee †	Men	1,800	90	2,340
	Women	Same	Same	Same
Cincinnati	Men	No data	100	3,000
	Women	No data	Same	Same
Newark	Men	2,100	100-200	3,400
	Women	1,600	100-200	2,800
New Orleans	Men	1,193	No data	1,710
	Women	No schedule		
Los Angeles *	Men	2,100	60	2,460
	Women	2,100	60	2,460

* No information in salary schedule concerning sex.

† Returns show salaries of January 1, 1920, as follows:

		Minimum.	Annual Increase.	Maximum.
New York	January 1, 1920	\$2,003	.....	\$3,317
	January 1, 1921	2,326	.....	3,484
	January 1, 1922	2,650	\$200	3,650
Buffalo	January 1, 1920	2,400	100	3,200
Milwaukee	January 1, 1920	No data	No data	3,000
† Indianapolis	September, 1920	No data	No data	\$3,000

High School Teachers — Continued.

TABLE 26 — *Concluded.*(b) *Rank Next to Principal* — Continued.

	Sex.	Minimum.	Annual Increase.	Maximum.
Jersey City *.....	Men.....	\$3,100	\$100	\$3,700
	Women....	3,100	100	3,700
Indianapolis * †.....	Men.....	No data	No data	2,500
	Women....	No data	No data	2,500
Providence.....	Men.....	2,500	80	2,580
	Women....	No schedule		
Portland, Ore.*.....	Men.....	No data	No data	1,800
	Women....	No data	No data	1,800

* No information in salary schedule concerning sex.

† See foot note on page 51.

TABLE 27. .

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
Philadelphia.....	\$3,300	\$2,185
Jersey City *.....	3,100	3,100
St. Louis.....	2,650	Same
Providence.....	2,500	
Buffalo.....	2,200	Same
Los Angeles *.....	2,100	2,100
Newark.....	2,100	1,600
Milwaukee.....	1,800	Same
New York.....	1,680	Same
New Orleans.....	1,193	

* No information in salary schedule concerning sex.

	Men.	Women.
Highest minimum.....	\$3,300 Philadelphia.	\$3,100 Jersey City.
Average minimum.....	2,262	2,164
Lowest minimum.....	1,193 New Orleans.	1,600 Newark.
Boston's minimum.....	2,340	1,428
Boston's rank.....	5th out of 11 cities.	9th out of 9 cities.

High School Teachers — Continued.

TABLE 28.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
Philadelphia.....	\$3,730	\$2,310
Jersey City*.....	3,700	3,700
St. Louis.....	3,625	Same
Detroit.....	3,500	Same
Newark.....	3,400	2,800
Chicago.....	3,300	Same
New York.....	3,150	Same
Cincinnati.....	3,000	Same
Indianapolis*.....	3,000	3,000
Cleveland.....	2,800	Same
Buffalo.....	2,700	Same
Providence.....	2,580	
Los Angeles*.....	2,460	2,460
San Francisco*.....	2,400	2,400
Milwaukee.....	2,340	Same
Portland, Ore.*.....	1,800	1,800
New Orleans.....	1,710	

* No information in salary schedule concerning sex.

	Men.	Women.
Highest maximum.....	\$3,730 Philadelphia.	\$3,700 Jersey City.
Average maximum.....	2,894	2,859
Lowest maximum.....	1,710 New Orleans.	1,800 Portland, Ore.
Boston's maximum.....	3,348	2,100
Boston's rank.....	6th out of 18 cities	15th out of 16 cities.

High School Teachers — Continued.

TABLE 29.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Philadelphia.....	\$2,900	\$1,800	\$3,300	\$2,185	\$400	\$385	14	21
St. Louis.....	2,250	2,250	2,650	2,650	400	400	18	18
New York.....	1,680	1,680	1,680	1,680	0	0	0	0

	Men.	Women.
Increase in minimum:		
Highest.....	\$400 Philadelphia. St. Louis.	\$400 St. Louis.
Average.....	400	393
Lowest (where any increase was given),	400 Philadelphia. St. Louis.	385 Philadelphia.
Boston's.....	144	96
Boston's rank.....	3d out of 3 cities giving increase.	3d out of 3 cities giving increase.

One city, New York, has given no increase to either men or women since September, 1917.

High School Teachers—Continued.

TABLE 30.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Maximum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT. INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Detroit.....	\$2,500	\$2,500	\$3,500	\$3,500	\$1,000	\$1,000	40	40
Buffalo.....	2,000	2,000	2,700	2,700	700	700	35	35
Jersey City *.....	3,000	3,000	3,700	3,700	700	700	23	23
Cincinnati.....	2,500	2,500	3,000	3,000	500	500	20	20
Indianapolis *.....	2,000	2,000	2,500	2,500	500	500	25	25
St. Louis.....	3,150	3,150	3,625	3,625	475	475	15	15
Philadelphia.....	3,300	2,000	3,730	2,310	430	310	13	16
Cleveland.....	2,400	2,400	2,800	2,800	400	400	17	17
Providence.....	2,200	.....	2,580	.....	380	.....	17	.....
Chicago.....	3,160	3,160	3,300	3,300	140	140	4	4
Newark.....	3,300	.....	3,400	.....	100	.....	3	.....
Milwaukee.....	2,250	2,250	2,340	2,340	90	90	4	4
New York.....	3,150	3,150	3,150	3,150	0	0	0	0
Portland, Ore.*.....	1,800	1,800	1,800	1,800	0	0	0	0

* No information in salary schedule concerning sex.

	Men.	Women.
Increase in maximum:		
Highest.....	\$1,000 Detroit.	1,000 Detroit.
Average.....	451	482
Lowest (where any increase was given).	90 Milwaukee.	90 Milwaukee.
Boston's.....	144	120
Boston's rank.....	10th out of 13 cities giving increase.	10th out of 11 cities giving increase.

Two cities, New York and Portland, Ore., have given no increase to either men or women since September, 1917.

High School Teachers — Continued.

TABLE 31.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to Size of Cities.

	Minimum.	Annual Increase.	Maximum.
New York*.....	\$5,000	.....	\$5,000
Chicago.....	3,450	\$115	4,620
Philadelphia:			
24 or less teachers.....	3,960	.....	3,960
25-49 teachers.....	4,510	.....	4,510
50 or more teachers.....	5,060	.....	5,060
St. Louis.....	3,600	No data	4,300
Boston.....	3,348	144	4,212
Cleveland.....			4,000
Pittsburgh:			
Less than 4-year course.....	2,310	100	2,860
4-year course.....	2,860	100	3,410
Detroit.....			5,000
Buffalo*.....	3,000	125	3,500
San Francisco.....			3,540
Milwaukee*.....	3,120	120	3,600
Cincinnati.....	2,600	100	4,200
Newark.....	3,600	No data	4,800
New Orleans.....			2,755
Los Angeles.....			3,900

* Returns show salaries of January 1, 1920, as follows:

	Minimum.	Annual Increase.	Maximum.
New York.....			
January 1, 1920.....	\$5,000	.....	\$5,167
January 1, 1921.....	5,000	.....	5,333
January 1, 1922.....	5,000	\$250	5,500
Buffalo.....			
January 1, 1920.....	3,500	100	4,500
Milwaukee.....			
January 1, 1920.....	3,200	No data	4,200

High School Teachers — Continued.

TABLE 31 — *Concluded.*(c) *Principal* — Continued.

	Minimum.	Annual Increase.	Maximum.
Jersey City			\$6,000
Providence.....	\$2,700	No data	3,610
Louisville.....	2,150	No data	3,500
Rochester.....			4,400
Denver.....			4,500
Portland, Ore.....	2,500	No data	3,500

TABLE 32.

(c) PRINCIPAL.

(Includes the Chief Executive Officer of the School District.)

Minimum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Principal in Each City.

New York	\$5,000
Philadelphia:	
24 or less teachers	3,960
25-49 teachers	4,510
50 or more teachers	5,060
St. Louis	3,600
Chicago	3,450
Milwaukee	3,120
Buffalo	3,000
Providence	2,700
Cincinnati	2,600
Pittsburgh:	
Less than 4-year course	2,310
4-year course	2,860
Louisville.	2,150

Highest minimum	\$5,000	New York.
Average minimum	3,409	
Lowest minimum	2,150	Louisville.
Boston's minimum	3,348	
Boston's rank, 5th out of 11 cities.		

High School Teachers — Continued.

TABLE 33.

(c) PRINCIPAL.

(Includes the Chief Executive Officer of the School District.)

Maximum Salaries of September, 1919, in Cities of 200,000 Population or Over, Arranged According to the Salary of the Lowest Paid Principal in Each City.

Jersey City	\$6,000
Detroit	5,000
New York	5,000
Newark	4,800
Chicago	4,620
Denver *	4,500
Rochester	4,400
St. Louis	4,300
Cincinnati	4,200
Cleveland	4,000
Philadelphia:	
24 or less teachers	3,960
25-49 teachers	4,510
50 or more teachers	5,060
Los Angeles	3,900
Providence	3,610
Milwaukee	3,600
San Francisco	3,540
Buffalo	3,500
Louisville	3,500
Portland, Ore.	3,500
Pittsburgh:	
Less than 4-year course	2,860
4-year course	3,410
New Orleans	2,755
Highest maximum	\$6,000
Average maximum	4,110
Lowest maximum	2,755
Boston's maximum	4,212
Boston's rank, 10th out of 21 cities.	

Jersey City.

New Orleans.

* Men and women.

High School Teachers — Continued.

TABLE 34.

(c) PRINCIPAL.

(Includes the Chief Executive Officer of the School District.)

Minimum Salaries in Cities of 200,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Principal in Each City.

	September, 1917.	September, 1919.	Annual Increase.	Per Cent Increase.
Philadelphia:				
24 or less teachers.....	\$3,500	\$3,960	\$460	13
25-49 teachers.....	4,000	4,510	510	13
50 or more teachers.....	4,500	5,060	560	12
Pittsburgh:				
Less than 4-year course.....	2,000	2,310	310	16
4-year course.....	2,500	2,860	360	14
Louisville.....	2,000	2,150	150	8
St. Louis.....	3,500	3,600	100	3
New York.....	5,000	5,000	0	0

Increase in minimum:

Highest \$460 Philadelphia (24 or less teachers).

Average 386

Lowest (where any increase was given) 100 St. Louis.

Boston's 144

Boston's rank, 3d out of 4 cities giving increase.

One city, New York, has given no increase since September, 1917.

PART II.

SALARIES OF PUBLIC SCHOOL TEACHERS
IN CITIES AND TOWNS OF MASSACHUSETTS
OF 30,000 POPULATION OR OVER.

I.— Kindergarten Teachers.

TABLE 36.

*Minimum, Annual Increase and Maximum Salaries of September, 1919,
in Massachusetts Cities and Towns of 30,000 Population or Over,
Arranged According to the Population.*

	Minimum.	Annual Increase.	Maximum.
Boston:			
Assistant (one session).....	\$576	\$96	\$960
First assistant (one session).....	1,032	96	1,224
Worcester.....	675	75	1,200
Fall River:			
Assistant.....	820	40	980
Regular.....	900	40	1,100
New Bedford.....	863	58	1,150
Cambridge:			
Assistant.....	504	60	924
Head teacher.....	576	60	1,056
Lowell:			
Assistant.....	600	No data	780
Principal.....	No data	No data	840
Springfield:			
Assistant.....	1,025	No data	1,200
Director (teacher):			
one session:			
1 assistant (10 months).....	No data	No data	1,250
2 assistants (10 months).....	No data	No data	1,300
3 assistants (10 months).....	No data	No data	1,350
two sessions:			
1 assistant (10 months).....	No data	No data	1,350
2 assistants (10 months).....	No data	No data	1,400
3 assistants (10 months).....	No data	No data	1,450
Lynn.....	650	No data	1,000
Somerville.....	No data	No data	950
Haverhill.....	700	75-50	1,000
Newton:			
Assistant.....	No data	100	950
Kindergartner.....	No data	100	1,100
Fitchburg.....	650	60-75	1,250
Pittsfield.....	560	40	880

Kindergarten Teachers—Continued.

TABLE 36 — Concluded.

	Minimum.	Annual Increase.	Maximum.
Salem:			
Assistant.....	\$600	\$50	\$700
Principal.....	800	50	900
Brookline:			
Assistant.....	No data	No data	1,188
Kindergartner.....	No data	No data	1,265

TABLE 37.

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Kindergarten Teacher in Each City.

Springfield:		
Assistant		\$1,025
Director (teacher)		No data
New Bedford		863
Fall River:		
Assistant		820
Regular		900
Haverhill		700
Worcester		675
Fitchburg		650
Lynn		650
Lowell:		
Assistant		600
Principal		No data
Salem:		
Assistant		600
Principal		800
Pittsfield		560
Cambridge:		
Assistant		504
Head teacher		576
Highest minimum:		
Assistant	\$1,025	Springfield.
Average minimum	709	
Lowest minimum:		
Assistant	504	Cambridge.
Boston's minimum:		
Assistant	576	
First assistant	1,032	
Boston's rank:		
Assistant, 10th out of 12 cities.		
First assistant, 1st out of 10 cities.		

Kindergarten Teachers — Continued.

TABLE 38.

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Kindergarten Teacher in Each City.

Fitchburg	\$1,250
Springfield:	
Assistant	1,200
Director (teacher):	
One session:	
1 assistant (10 months)	1,250
2 assistants (10 months)	1,300
3 assistants (10 months)	1,350
Two sessions:	
1 assistant (10 months)	1,350
2 assistants (10 months)	1,400
3 assistants (10 months)	1,450
Worcester	1,200
Brookline:	
Assistant	1,188
Kindergartner	1,265
New Bedford	1,150
Haverhill	1,000
Lynn	1,000
Fall River:	
Assistant	980
Regular	1,100
Newton:	
Assistant	950
Kindergartner	1,100
Somerville	950
Cambridge:	
Assistant	924
Head teacher	1,056
Pittsfield	880
Lowell:	
Assistant	780
Principal	840
Salem:	
Assistant	700
Principal	900
Highest maximum:	
Assistant	\$1,250
Head teacher	1,350
	Fitchburg.
	Springfield.
	(Director, one session. 3 assistants.)
Average maximum	1,097

Kindergarten Teachers — Continued.

TABLE 38 — *Concluded.*

Lowest maximum:

Assistant	\$700	Salem.
Head teacher	840	Lowell.

Boston's maximum:

Assistant	960
First assistant	1,224

Boston's rank:

Assistant, 9th out of 15 cities.
First assistant, 4th out of 15 cities.

TABLE 39.

Minimum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Kindergarten Teacher in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Springfield:				
Assistant	\$575	\$1,025	\$450	78
Lynn	300	650	350	117
Fall River:				
Assistant	520	820	300	58
Regular	600	900	300	50
New Bedford	600	863	263	44
Haverhill	500	700	200	40
Salem:				
Assistant	400	600	200	50
Principal	600	800	200	33
Lowell:				
Assistant	500	600	100	20
Pittsfield	520	560	40	8
Cambridge:				
Assistant	504	504	0	0
Head teacher	576	576	0	0

Increase in minimum:

Highest	\$450	Springfield.
Average	240	
Lowest (where any increase was given)	40	Pittsfield.
Boston's	96	

Boston's rank, 8th out of 9 cities giving increase.

One city, Cambridge, has given no increase since September, 1917.

Kindergarten Teachers — Continued.

TABLE 40.

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Kindergarten Teacher in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Springfield:				
Assistant.....	\$750	\$1,200	\$450	60
Director (teacher):				
One session:				
1 assistant (10 months).....	800	1,250	450	56
2 assistants (10 months).....	850	1,300	450	53
3 assistants (10 months).....	900	1,350	450	50
Two sessions:				
1 assistant (10 months).....	900	1,350	450	50
2 assistants (10 months).....	950	1,400	450	47
3 assistants (10 months).....	1,000	1,450	450	45
Newton:				
Assistant.....	600	950	350	58
Kindergartner.....	950	1,100	150	16
Fall River:				
Assistant.....	680	980	300	44
Regular.....	800	1,100	300	38
New Bedford.....	850	1,150	300	35
Brookline:				
Assistant.....	900	1,188	288	32
Kindergartner.....	1,000	1,265	265	27
Worcester.....	950	1,200	250	26
Haverhill.....	800	1,000	200	25
Salem:				
Assistant.....	500	700	200	40
Principal.....	700	900	200	29
Somerville.....	750	950	200	27
Lowell:				
Assistant.....	650	780	130	20
Principal.....	700	840	140	20
Lynn.....	900	1,000	100	11

Kindergarten Teachers — Concluded.

TABLE 40 — *Concluded.*

	September, 1910.	September, 1919.	Increase.	Per Cent Increase.
Pittsfield	\$800	\$880	\$80	10
Cambridge:				
Assistant	864	924	60	7
Head teacher	996	1,056	60	6

Increase in maximum:

Highest \$450 Springfield. (Assist-
ant and Director.)

Average 269

Lowest 60 Cambridge. (Assistant
and Head Teacher.)

Boston's 192

Boston's rank, 10th out of 14 cities.

II.—Elementary School Teachers.

TABLE 41.

(a) ASSISTANT.

(Includes all Regular Grade Teachers Without Executive or Administrative Duties.)

*Minimum, Annual Increase and Maximum Salaries of September, 1919,
in Massachusetts Cities and Towns of 30,000 Population or Over,
Arranged According to the Population.*

	Minimum.	Annual Increase.	Maximum.
Boston	\$696.	\$96	\$1,368
Worcester:			
Grade I	675	75	1,275
Grades II-VI	675	75	1,200
Grade VII	675	75	1,250
Grade VIII	675	75	1,300
Fall River	900	40	1,100
New Bedford:			
Grades I-VII	863	58	1,150
Grade VIII	863	58	1,236
Cambridge:			
Grades I-VII	588	60	1,080
Grade VIII	768	60	1,140

Elementary School Teachers — Continued.

TABLE 41 — *Concluded.*(a) *Assistant* — Continued.

	Minimum.	Annual Increase.	Maximum.
Lowell.....	\$600	\$80	\$1,080
Springfield:			
Grades I-VII.....	1,180	30-60	1,400
Grade VIII.....	1,220	30-60	1,450
Grades VII-VIII (college graduate).....	1,220	30-60	1,650
Lynn:			
Grades I-VI.....	650	No data	1,000
Grades VII-VIII.....	650	No data	1,100
Lawrence.....	750	50	1,200
Somerville.....	700	50-100	1,050
Brockton.....	750	50	900
Haverhill.....	700	75-50	1,000
Chelsea:			
Grades I-VI.....	700	50	1,000
Grades VII-VIII.....	750	50	1,000
Newton.....	No data	100	1,300
Fitchburg.....	650	60-75	1,250
Pittsfield.....	560	40	880
Everett.....	650	No data	950
Salem.....	850	50	1,000
Brookline:			
Grades I-VII.....	No data	No data	1,392
Grade VIII.....	No data	No data	1,518
Medford.....	550	100	1,000

Elementary School Teachers — Continued.

TABLE 42.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Assistant in Each City.

Springfield:

Grades I-VII	\$1,180
Grade VIII	1,220
Grades VII-VIII (college graduate)	1,220
Fall River	900
New Bedford	* 863
Salem	850
Brockton	750
Lawrence	750
Chelsea:	
Grades I-VI	700
Grades VII-VIII	750
Haverhill	700
Somerville	700
Worcester	* 675
Everett	650
Fitchburg	650
Lynn	* 650
Lowell	600
Cambridge:	
Grades I-VII	588
Grade VIII	768
Pittsfield	560
Medford	550

Highest minimum:

Grades I-VII	\$1,180	Springfield.
Grade VIII	1,220	Springfield.
Average minimum	775	

Lowest minimum:

Grades I-VIII	550	Medford.
Boston's minimum	696	
Boston's rank, 10th out of 18 cities.		

* Minimum salary the same for all grades. Maximum differs.

Elementary School Teachers — Continued.

TABLE 43.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Assistant in Each City.

Springfield:		
Grades I-VII		\$1,400
Grade VIII		1,450
Grades VII and VIII (college graduate)		1,650
Brookline:		
Grades I-VII		1,392
Grade VIII		1,518
Newton		1,300
Fitchburg (thirteen years)		1,250
Lawrence		1,200
Worcester:		
Grades II-VI		1,200
Grade VII		1,250
Grade I		1,275
Grade VIII		1,300
New Bedford:		
Grades I-VII		1,150
Grade VIII		1,236
Fall River		1,100
Cambridge:		
Grades I-VII		1,080
Grade VIII		1,140
Lowell		1,080
Somerville		1,050
Chelsea		* 1,000
Haverhill		1,000
Lynn:		
Grades I-VI		1,000
Grades VII-VIII		1,100
Medford		1,000
Salem		1,000
Everett		950
Brockton		900
Pittsfield		880

Highest maximum:		
Grades I-VII	\$1,400	Springfield.
Grades VII-VIII (college graduate)	1,650	Springfield.
Average maximum	1,173	
Lowest maximum:		
Grades I-VIII	880	Pittsfield.
Boston's maximum	1,368	
Boston's rank, 3d out of 20 cities.		

* Maximum salaries the same for all grades. Minimum salaries differ.

Elementary School Teachers — Continued.

TABLE 44.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Minimum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Assistant in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Springfield:				
Grades I-VII.....	\$730	\$1,180	\$450	62
Grade VIII.....	770	1,220	450	58
Lynn.....	300	* 650	350	117
Fall River.....	600	900	300	50
New Bedford.....	600	* 863	263	44
Brockton.....	550	750	200	36
Chelsea:				
Grades I-VI.....	500	700	200	40
Grades VII-VIII.....	500	750	250	50
Haverhill.....	500	700	200	40
Lawrence.....	550	750	200	36
Salem.....	650	850	200	31
Medford.....	400	550	150	38
Lowell.....	500	600	100	20
Everett.....	600	650	50	8
Pittsfield.....	520	560	40	8
Cambridge:				
Grades I-VII.....	588	588	0	0
Grade VIII.....	768	768	0	0

Increase in minimum:

Highest, Grades I-VIII . . . \$450 Springfield.

Average . . . 227

Lowest (where any increase
was given), Grades I-VIII 40 Pittsfield.

Boston's . . . 96

Boston's rank, 12th out of 14 cities.

One city, Cambridge, has given no increase since September,
1917.

* Minimum salary same for all grades. Maximum differs.

Elementary School Teachers — Continued.

TABLE 45.

(a) ASSISTANT.

(Includes All Regular Grade Teachers Without Executive or Administrative Duties.)

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Assistant in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Springfield:				
Grades I-VII.....	\$950	\$1,400	\$450	47
Grade VIII.....	1,000	1,450	450	45
Brookline:				
Grades I-VII.....	1,000	1,392	392	39
Grade VIII.....	1,100	1,518	418	38
Lawrence.....	850	1,200	350	41
Fall River.....	800	1,100	300	38
New Bedford:				
Grades I-VII.....	850	1,150	300	35
Grade VIII.....	925	1,236	311	34
Medford:				
Grades I-VI.....	750	1,000	250	33
Grades VII-VIII.....	800	1,000	200	25
Worcester:				
Grades II-VI.....	950	1,200	250	29
Grade VII.....	950	1,250	300	32
Grade I.....	950	1,275	325	34
Grade VIII.....	1,050	1,300	250	24
Chelsea:				
Grades I-VI.....	800	1,000	200	25
Grades VII-VIII.....	850	1,000	150	18
Everett.....	750	950	200	27
Haverhill.....	800	1,000	200	25
Salem.....	800	1,000	200	25
Somerville.....	850	1,050	200	24
Lowell.....	900	1,080	180	20
Newton.....	1,150	1,300	150	13
Lynn:				
Grades I-VI.....	900	1,000	100	11
Grades VII-VIII.....	950	1,100	150	16
Pittsfield.....	800	880	80	10

Elementary School Teachers — Continued.

TABLE 45 — *Concluded.*

(a) Assistant — Continued.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
Cambridge:				
Grades I-VII.....	\$1,008	\$1,080	\$72	7
Grade VIII.....	1,068	1,140	72	7
Brockton.....	850	900	50	6

Increase in maximum:

Highest, Grades I-VIII . . . \$450 Springfield.

Average . . . 234

Lowest, Grades I-VIII . . . 50 Brockton.

Boston's . . . 192

Boston's rank, 13th out of 19 cities.

TABLE 46.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All Do Some Teaching.

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Population.

	Sex.	Minimum.	Annual Increase.	Maximum.
Boston.....	Men.....	\$1,500	\$120	\$2,580
	Women.....	1,404	96	1,692
Worcester*.....	Men.....	No data	No data	† 1,300
	Women.....	No data	No data	† 1,300
Fall River.....	Women...	1,160	.....	1,160
New Bedford.....	Women...	1,250	58	1,610
Cambridge.....	Men.....	1,200	120	1,872
	Women...	840	60	1,220
Springfield.....	Women...	1,080	50	1,180
Lynn.....	Women...	650	No data	1,100
Lawrence.....	Women...	1,250	.....	1,250
Somerville.....	Women...	No data	No data	1,125
Brockton.....	Women...	750	50	950
Chelsea.....	Men.....	No data	No data	1,400
	Women.....	1,000	No data	Same
Newton.....	Men.....	No data	100	1,450
	Women.....	No data	100	Same
Everett.....	Women...	1,000	No data	1,050

* No information in salary schedule concerning sex.

† Plus \$7.50 for each room.

Elementary School Teachers — Continued.

TABLE 47.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All Do Some Teaching.

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Women of this Rank in Each City.

	Men.	Women.
Lawrence.....		\$1,250
New Bedford.....		1,250
Fall River.....		1,160
Springfield.....		1,080
Chelsea.....	No data	1,000
Everett.....		1,000
Cambridge.....	\$1,200	840
Brockton.....		750
Lynn.....		650

Highest minimum	\$1,250	Lawrence.
		New Bedford.
Average minimum	998	
Lowest minimum	650	Lynn.
Boston's minimum	1,404	
Boston's rank, 1st out of 10 cities.		

Elementary School Teachers — Continued.

TABLE 48.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All Do Some Teaching.

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Women of this Rank in Each City.

	Men.	Women.
New Bedford.....		\$1,610
Newton.....	\$1,450	Same
Chelsea.....	1,400	Same
Worcester*.....	† 1,300	† 1,300
Lawrence.....		1,250
Cambridge.....	1,872	1,220
Springfield.....		1,180
Fall River.....		1,160
Somerville.....		1,125
Lynn.....		1,100
Everett.....		1,050
Brockton.....		950

	Men.		Women.	
Highest maximum.....	\$1,872	Cambridge.	\$1,610	New Bedford.
Average.....	1,506		1,233	
Lowest maximum.....	† 1,300	Worcester.	950	Brockton.
Boston's maximum.....	2,580		1,692	
Boston's rank.....	1st out of 5 cities.		1st out of 13 cities.	

* No information in salary schedule concerning sex.

† Plus \$7.50 for each room.

Elementary School Teachers — Continued.

TABLE 49.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant Supervising Assistant.) All Do Some Teaching.

Minimum Salaries in Cities and Towns of Massachusetts of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Position Arranged According to the Amount of Increase of the Lowest Paid Woman of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....		\$950		\$1,250		\$300		32
Fall River.....		860		1,160		300		35
Brockton.....		550		750		200		36
Everett.....		800		1,000		200		25
Lawrence.....		1,080		1,250		170		16
Chelsea.....		850	No data	1,000		150		18
Cambridge.....	\$1,200	840	\$1,200	840	0	0	0	0

Increase in minimum:

Highest \$300 New Bedford.
Fall River.

Average 220

Lowest (where any increase
was given) 150 Chelsea.

Boston's 192

Boston's rank, 5th out of 7 cities giving increase.

One city, Cambridge, has given no increase in the minimum
since September, 1917.

Elementary School Teachers — Continued.

TABLE 50.

(b) RANK NEXT TO PRINCIPAL.

(Includes Submaster, Master's Assistant, Assistant Principal, Head Assistant, Supervising Assistant.) All Do Some Teaching.

Maximum Salaries in Cities and Towns of Massachusetts of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Woman of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....		\$1,250		\$1,610		\$360		29
Fall River.....		860		1,160		300		35
Chelsea.....	\$1,200	1,200	\$1,400	1,400	\$200	200	17	17
Everett.....		850		1,050		200		24
Newton.....	1,250	1,250	1,450	1,450	200	200	16	16
Somerville.....		925		1,125		200		22
Lawrence.....		1,080		1,250		170		16
Lynn.....		1,000		1,100		100		10
Cambridge.....	1,800	1,140	1,872	1,220	72	80	4	7
Brockton.....		900		950		50		6

	Men.		Women.	
Highest increase in maximum.....	\$200	Chelsea. Newton.	\$360	New Bedford.
Average increase in maximum.....	157		186	
Lowest increase in maximum.....	72	Cambridge.	50	Brockton.
Boston's increase in maximum.....	240		288	
Boston's rank.....	1st out of 4 cities.		3d out of 11 cities.	

Elementary School Teachers—Continued.

TABLE 51.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Population.

	Sex.	Minimum.	Annual Increase.	Maximum.
Boston.....	Men.....	\$2,820	\$120	\$3,540
	Women.....	Same	Same	Same
Worcester: *				
2 rooms.....	Men.....	† 1,250	100	† 1,450
2 rooms.....	Women.....	† 1,250	100	† 1,450
Fall River:				
Grammar:				
11 or less rooms.....	Men.....	1,260	120	1,620
12 or more rooms.....	Men.....	1,860	120	2,460
	Women.....	Same	Same	Same
Primary.....	Women.....	1,140	120	1,500
New Bedford.....	Men.....	1,600	115	2,760
	Women.....	Same	Same	Same
Cambridge:				
8 or less rooms.....	Men.....	768	60	1,224
9 or more rooms.....	Men.....	960	60	1,500
	Women.....	Same	Same	Same
Lowell.....	Men.....	1,320	100	2,420
	Women.....	No data	No data	1,130
Springfield.....		No data	No data	No data
Lynn.....	Men.....	1,500	No data	2,200
	Women.....	No data	No data	1,850
Lawrence.....	Men.....	1,400	100	2,500
	Women.....	1,480	.....	1,480
Somerville.....	Men.....	No data	100	2,300
	Women.....	Same	Same	Same
Brockton.....	Men.....	No data	100	2,300
	Women.....	No data	No data	\$ 900
Haverhill.....	Men.....	No data	No data	1,800
	Women.....	No data	No data	1,400
Chelsea.....	Men ||.....	2,100	No data	2,500
	Women.....	1,200	100	1,500
Newton: *				
Supervising.....	Men.....	No data	No data	3,000
Non-supervising.....	Men.....	No data	No data	* No data
Supervising.....	Women.....	No data	No data	3,000
Non-supervising.....	Women.....	No data	No data	* No data
Fitchburg.....	Women.....	No data	No data	¶ 1,250
	Men.....	No data	No data	2,000
Pittsfield.....				
	Women.....	No data	No data	1,880
	Men.....	1,800	No data	2,200
Everett.....	Women.....	1,100	No data	2,100
	Men.....	2,000	100	2,200
Salem:.....				
9 or less rooms.....	Women.....	No data	No data	1,100
10 or more rooms.....	Women.....	No data	No data	1,200
Brookline.....	Men.....	No data	No data	3,025
	Women.....	No data	No data	1,328
Medford.....	Men.....	Not fixed	100	2,000
	Women.....	Not fixed	100	2,000

* No information in salary schedule concerning sex.

† For each additional room up to 7 add \$75; for each additional room from 7 to 10 add \$50; for each additional room from 11 to 20 add \$75. Minimum for 20 rooms, \$2,500.

‡ For each additional room up to 20 add \$75. Maximum for 20 rooms, \$2,800.

§ Plus \$15 per room.

|| Junior High school.

¶ Plus \$50 for each room.

¹ Plus \$40 for each room.

² Depends on number of rooms.

Elementary School Teachers — Continued.

TABLE 52.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Principal in Each City.

	Men.	Women.
Chelsea.....	† \$2,100	\$1,200
Salem.....	2,000	
Everett.....	1,800	1,100
New Bedford.....	1,600	Same
Lynn.....	1,500	
Lawrence.....	1,400	1,480
Lowell.....	1,320	
Fall River:		
Primary.....		1,140
Grammar:		
11 or less rooms.....	1,260	Same
12 or more rooms.....	1,860	Same
Worcester*.....	† 1,250	† 1,250
Cambridge:		
8 or less rooms.....	768	Same
9 or more rooms.....	960	Same

	Men.	Women.
Highest minimum.....	\$2,100 Chelsea.	\$1,600 New Bedford.
Average minimum.....	1,485	1,262
Lowest minimum.....	768 Cambridge. (8 or less rooms.)	768 Cambridge. (8 or less rooms.)
Boston's minimum.....	2,820	2,820
Boston's rank.....	1st out of 11 cities.	1st out of 8 cities.

* No information in salary schedule concerning sex.

† Junior High School.

‡ For each additional room up to 7 add \$75; for each additional room from 7 to 10 add \$50; for each additional room from 11 to 20 add \$75. Minimum for 20 rooms, \$2,500.

Elementary School Teachers—Continued.

TABLE 53.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Salary of the Lowest Paid Male Principal in Each City.

	Men.	Women.
Brookline:		
Grammar.....	\$3,025	
Primary.....		\$1,328
Newton.....	3,000	
New Bedford.....	2,760	Same
Chelsea.....	† 2,500	1,500
Lawrence.....	2,500	1,480
Lowell.....	2,420	
2 rooms.....		1,105
3 or more rooms.....		1,130
Brockton.....	2,300	‡ 900
Somerville.....	2,300	Same
Everett.....	2,200	2,100
Lynn.....	2,200	1,850
Salem.....	2,200	
9 or less rooms.....		1,100
10 or more rooms.....		1,200
Medford.....	2,000	§
Pittsfield.....	2,000	|| 880
Haverhill.....	1,800	1,400
Fall River:		
Grammar:		
11 or less rooms.....	1,620	Same
12 or more rooms.....	2,460	Same
Primary.....		1,500

* No explanation in the salary schedule concerning sex.

† Junior High School.

‡ Plus \$15 per room.

§ Varies with the number of rooms.

|| Plus \$40 per room.

Elementary School Teachers — Continued.

TABLE 53 — *Concluded.*(c) *Principal* — Continued.

	Men.	Women.
Worcester:*		
2 rooms.....	† \$1,450	† \$1,450
Cambridge:		
8 or less rooms.....	1,224	Same
9 or more rooms.....	1,500	Same
Fitchburg.....		‡ 1,250

* No explanation in the salary schedule concerning sex.

† For each additional room up to 20 add \$75. Maximum for 20 rooms, \$2,800.

‡ Plus \$50 per room.

	Men.	Women.
Highest maximum.....	\$3,025 Brookline.	\$2,760 New Bedford.
Average.....	2,182	1,526
Lowest maximum.....	1,224 Cambridge. (8 or less rooms.)	* 880 Pittsfield.
Boston's maximum.....	3,540	3,540
Boston's rank.....	1st out of 18 cities.	1st out of 17 cities.

* Plus \$40 per room.

Elementary School Teachers—Continued.

TABLE 54.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum Salaries in Cities and Towns of Massachusetts of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Principal in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....	\$1,250	\$1,250	\$1,600	\$1,600	\$350	\$350	28	28
Fall River:								
Primary.....		840		1,140		300		36
Grammar:								
11 or less rooms.....	960	960	1,260	1,260	300	300	31	31
12 or more rooms.....	1,560	1,560	1,860	1,860	300	300	19	19
Chelsea.....	1,900	900	2,100	1,200	200	300	11	33
Everett.....	1,600	1,000	1,800	1,100	200	100	13	10
Salem.....	1,900		2,000		100		5	
Cambridge:								
8 or less rooms.....	768	768	768	768	0	0	0	0
9 or more rooms.....	960	960	960	960	0	0	0	0
Lawrence.....	1,400	1,000	1,400	1,480	0	480	0	48
Lynn.....	1,500		1,500		0		0	

	Men.	Women.
Increase in minimum:		
Highest.....	\$350 New Bedford.	\$480 Lawrence.
Average.....	242	304
Lowest (where any increase was given).....	100 Salem.	100 Everett.
Boston's.....	240	240
Boston's rank.....	3d out of 6 cities giving increase.	5th out of 6 cities giving increase.

Three cities, Cambridge, Lawrence, Lynn have given no increase to men since September, 1917.

One city, Cambridge, has given no increase to women since September, 1917.

Elementary School Teachers — Concluded.

TABLE 55.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Principal in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Brookline:								
Primary.....		\$1,050		\$1,328		\$278		26
Grammar.....	\$2,500		\$3,025		\$525		21	
New Bedford.....	2,250	2,250	2,760	2,760	510	510	23	23
Chelsea.....	2,200	1,200	2,500	1,500	300	300	14	25
Fall River:								
Primary.....		1,200		1,500		300		25
Grammar:								
11 or less rooms.....	1,320	1,320	1,620	1,620	300	300	23	23
12 or more rooms.....	2,160	2,160	2,460	2,460	300	300	14	14
Lawrence.....	2,200	1,300	2,500	1,480	300	180	14	14
Everett.....	2,000	2,000	2,200	2,100	200	100	10	5
Haverhill.....	1,600	1,100	1,800	1,400	200	300	13	27
Lynn.....	2,000	1,750	2,200	1,850	200	100	10	6
Medford.....	1,800		2,000		200		11	
Pittsfield.....	1,800		2,000		200		11	
Newton.....	2,850		3,000		150		5	
Brockton.....	2,200		2,300		100		5	
Salem.....	2,100	900	2,200	1,100	100	200	5	22
Somerville.....	2,200	2,200	2,300	2,300	100	100	5	5
Cambridge:								
8 or less rooms.....	1,128	1,128	1,224	1,224	96	96	9	9
9 or more rooms.....	1,320	1,320	1,500	1,500	180	180	14	14

	Men.	Women.
Increase in maximum:		
Highest.....	\$525 Brookline.	\$510 New Bedford.
Average.....	233	232
Lowest.....	96 Cambridge. (8 or less rooms.)	96 Cambridge. (8 or less rooms.)
Boston's.....	120	120
Boston's rank.....	13th out of 16 cities.	9th out of 12 cities.

III.—High School Teachers.

TABLE 56.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive, or Administrative Duties.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Population.

	Sex.	Minimum.	Annual Increase.	Maximum.
Boston.....	Men.....	\$1,476	\$144	\$2,772
	Women....	1,068	96	1,932
Worcester.....	Men.....	1,350	125	2,600
	Women....	1,000	100	2,000
Fall River.....	Men.....	1,300	80	1,980
	Women....	1,140	40-80	1,500
New Bedford.....	Men.....	1,610	115	2,185
	Women....	1,150	115	1,610
Cambridge.....	Men.....	1,200	120	1,900
	Women....	840	60	1,344
Lowell.....	Men.....	1,080	130	1,870
	Women....	780	100	1,380
Springfield.....	Men.....	1,700	No data	2,300
	Women....	1,150	No data	1,800
Lynn.....	Men.....	1,200	No data	1,900
	Women....	750	No data	1,300
Lawrence.....	Men.....	1,000	100	2,300
	Women....	1,000	100	1,795
Brockton.....	Men.....	No data	100	1,750
	Women....	No data	50	1,150
Haverhill.....	Men.....	No data	No data	1,600
	Women....	No data	No data	1,250
Chelsea.....	Men.....	1,400	No data	1,800
	Women....	800	No data	1,200
Newton.....	Men.....	No data	100	2,200
	Women....	No data	100	1,600
Fitchburg.....	Men.....	1,750	No data	2,050
	Women....	800	100	1,450
Pittsfield.....	Men.....	1,000	No data	1,600
	Women....	760	No data	1,040
Everett.....	Men.....	1,600	No data	2,200
	Women....	950	No data	1,350
Salem.....	Men.....	1,100	50	1,300
	Women....	900	50	1,100
Brookline.....	Men.....	No data	No data	No data
	Women....	No data	No data	2,012
Medford.....	Men.....	No data	100	1,800
	Women....	No data	100	1,200

High School Teachers — Continued.

TABLE 57.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Male Assistants in Each City.

	Men.	Women.
Fitchburg.....	\$1,750	\$800
Springfield.....	1,700	1,150
New Bedford.....	1,610	1,150
Everett.....	1,600	950
Chelsea.....	1,400	800
Worcester.....	1,350	1,000
Fall River.....	1,300	1,140
Cambridge.....	1,200	840
Lynn.....	1,200	750
Salem.....	1,100	900
Lowell.....	1,080	780
Lawrence.....	1,000	1,000
Pittsfield.....	1,000	760

	Men.	Women.
Highest minimum.....	\$1,750 Fitchburg.	\$1,150 New Bedford. Springfield.
Average minimum.....	1,330	925
Lowest minimum.....	1,000 Lawrence. Pittsfield.	750 Lynn.
Boston's minimum.....	1,476	1,068
Boston's rank.....	5th out of 14 cities.	4th out of 14 cities.

High School Teachers—Continued.

TABLE 58.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Male Assistants in Each City.

	Men.	Women.
Worcester.....	\$2,600	\$2,000
Lawrence.....	2,300	1,795
Springfield.....	2,300	1,800
Everett.....	2,200	1,350
Newton.....	2,200	1,600
New Bedford.....	2,185	1,610
Fitchburg.....	2,050	1,450
Fall River.....	1,980	1,500
Cambridge.....	1,900	1,344
Lynn.....	1,900	1,300
Lowell.....	1,870	1,380
Chelsea.....	1,800	1,200
Medford.....	1,800	1,200
Brockton.....	1,750	1,150
Haverhill.....	1,600	1,250
Pittsfield.....	1,600	1,040
Salem.....	1,300	1,100
Brookline.....		2,012

	Men.	Women.
Highest maximum.....	\$2,600 Worcester.	\$2,012 Brookline.
Average maximum.....	1,961	1,449
Lowest maximum.....	1,300 Salem.	1,040 Pittsfield.
Boston's maximum.....	2,772	1,932
Boston's rank.....	1st out of 18 cities.	3d out of 19 cities.

High School Teachers — Continued.

TABLE 59.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Minimum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Assistant in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....	\$1,050	\$850	\$1,610	\$1,150	\$560	\$300	53	35
Chelsea.....	1,000	700	1,400	800	400	100	40	14
Everett.....	1,200	800	1,600	950	400	150	33	19
Lawrence.....	700	700	1,000	1,000	300	300	43	43
Fall River.....	1,080	840	1,300	1,140	220	300	20	36
Pittsfield.....	800	640	1,000	760	200	120	25	19
Salem.....	900	700	1,100	900	200	200	22	29
Lowell.....	900	650	1,080	780	180	130	20	20
Lynn.....	1,200	650	1,200	750	0	100	0	15
Cambridge.....	1,200	840	1,200	840	0	0	0	0

	Men.	Women.
Increase in minimum:		
Highest.....	\$560 New Bedford.	\$300 Fall River. Lawrence. New Bedford.
Average.....	308	189
Lowest (where any increase was given).	180 Lowell.	100 Chelsea. Lynn.
Boston's.....	0	96
Boston's rank.....		10th out of 10 cities giving increase.

Two cities, Lynn, Cambridge, have given no increase in minimum to men since September, 1917.

One city, Cambridge, has given no increase in minimum to women since September, 1917.

High School Teachers — Continued.

TABLE 60.

(a) ASSISTANT.

(Includes All Regular High School Teachers Without Executive or Administrative Duties.)

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Male Assistant in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....	\$1,750	\$1,250	\$2,185	\$1,610	\$435	\$360	25	29
Worcester.....	2,200	1,650	2,600	2,000	400	350	18	21
Haverhill.....	1,250	1,000	1,600	1,250	350	250	28	25
Fall River.....	1,680	1,200	1,980	1,500	300	300	18	25
Lawrence.....	2,000	1,500	2,300	1,795	300	295	15	20
Everett.....	2,000	1,050	2,200	1,350	200	300	10	29
Medford.....	1,600	1,000	1,800	1,200	200	200	13	20
Newton.....	2,000	1,500	2,200	1,600	200	100	10	7
Salem.....	1,100	900	1,300	1,100	200	200	18	22
Lowell.....	1,700	1,200	1,870	1,380	170	180	10	15
Brockton.....	1,650	1,100	1,750	1,150	100	50	6	5
Cambridge.....	1,800	1,260	1,900	1,344	100	84	6	7
Pittsfield.....	1,500	1,000	1,600	1,040	100	40	7	4
Lynn.....	1,850	1,250	1,900	1,300	50	50	3	4
Chelsea.....	1,800	1,000	1,800	1,200	0	200	0	20
Brookline.....		1,750		2,012		262		15

	Men.		Women.	
Increase in maximum:				
Highest.....	\$435	New Bedford.	\$360	New Bedford.
Average.....	222		201	
Lowest (where any increase was given).	50	Lynn.	40	Pittsfield.
Boston's.....	144		168	
Boston's rank.....	11th out of 15 cities giving increase.		12th out of 17 cities.	

One city, Chelsea, has given no increase in the maximum to men since September, 1917.

High School Teachers — Continued.

TABLE 61.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Population.

	Sex.	Minimum.	Annual Increase.	Maximum.
Boston.....	Men.....	\$2,340	\$144	\$3,348
	Women....	1,428	96	2,100
Worcester.....	Men.....	2,575	125	2,950
Fall River.....	Men.....	2,500	No data	2,700
New Bedford.....	Men.....	2,185	No data	2,760
Cambridge.....	Men.....	2,040	120	2,380
Lowell.....	Men.....	No data	No data	2,600
Springfield.....	Men.....	2,400	No data	3,100
	Women....	1,800	No data	2,800
Lynn.....	Men.....	No data	No data	2,000
Lawrence.....	Men.....	2,520	No data	2,520
Somerville.....	Men.....	No data	No data	2,450
Brockton.....	Men.....	No data	100	2,000
	Women....	No data	100	1,300
Haverhill.....	Men.....	No data	No data	2,150
Chelsea.....	Men.....	No data	No data	1,800
Newton.....	Men.....	2,200	No data	3,000
	Women....	1,600	No data	2,500
Fitchburg.....	Men.....	2,050	No data	2,350
	Women....	1,200	No data	1,500
Pittsfield.....	Men.....	No data	No data	1,900
Everett.....	Men.....	2,000	No data	2,300
Salem.....	Men.....	2,100	100	2,300
Medford.....	Men.....	No data	100	2,200
	Women....	No data	100	1,700

High School Teachers — Continued.

TABLE 62.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
Worcester.....	\$2,575	
Lawrence.....	2,520	
Fall River.....	2,500	
Springfield.....	2,400	\$1,800
Newton.....	2,200	1,600
New Bedford.....	2,185	
Salem.....	2,100	
Fitchburg.....	2,050	1,200
Cambridge.....	2,040	
Everett.....	2,000	

	Men.	Women.
Highest minimum.....	\$2,575 Worcester.	\$1,800 Springfield.
Average minimum.....	2,257	1,533
Lowest minimum.....	2,000 Everett.	1,200 Fitchburg.
Boston's minimum.....	2,340	1,428
Boston's rank.....	5th out of 11 cities.	3d out of 4 cities.

High School Teachers — Continued.

TABLE 63.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Men of this Rank in Each City.

	Men.	Women.
Springfield.....	\$3,100	\$2,800
Newton.....	3,000	2,500
Worcester.....	2,950	
New Bedford.....	2,760	
Fall River.....	2,700	
Lowell.....	2,600	
Lawrence.....	2,520	
Somerville.....	2,450	
Cambridge.....	2,380	
Fitchburg.....	2,350	1,500
Everett.....	2,300	
Salem.....	2,300	
Medford.....	2,200	1,700
Haverhill.....	2,150	
Brockton.....	2,000	1,300
Lynn.....	2,000	
Pittsfield.....	1,900	
Chelsea.....	1,800	

	Men.	Women.
Highest maximum.....	\$3,100 Springfield.	\$2,800 Springfield.
Average maximum.....	2,414	1,960
Lowest maximum.....	1,800 Chelsea.	1,300 Brockton.
Boston's maximum.....	3,348	2,100
Boston's rank.....	1st out of 19 cities.	3d out of 6 cities.

High School Teachers — Continued.

TABLE 64.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals' and Masters, Heads of Department.)

Minimum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	September, 1917.	September, 1919.	Increase.	Per Cent Increase.
New Bedford.....	\$1,750	\$2,185	\$435	25
Lawrence.....	2,200	2,520	320	15
Salem.....	1,900	2,100	200	11
Everett.....	2,100	2,000	* 100	* 5
Cambridge.....	2,040	2,040	0	0

Increase in minimum:

Highest \$435 New Bedford.

Average 318

Lowest (where any increase
was given) 200 Salem.

Boston's 144

Boston's rank, 4th out of 4 cities giving increase.

One city, Cambridge, has given no increase in the minimum
since September, 1917.

* Decrease.

High School Teachers — Continued.

TABLE 65.

(b) RANK NEXT TO PRINCIPAL.

(Includes Assistant Principals and Masters, Heads of Department.)

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Man of this Rank in Each City.

	SEPTEMBER, 1917.		SEPTEMBER, 1919.		INCREASE.		PER CENT INCREASE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
New Bedford.....	\$2,050		\$2,760		\$710		35	
Worcester.....	2,500		2,950		450		18	
Lawrence.....	2,200		2,520		320		15	
Medford.....	1,900	\$1,500	2,200	\$1,700	300	\$200	16	13
Haverhill.....	1,900		2,150		250		13	
Fall River.....	2,500		2,700		200		8	
Lowell.....	2,400		2,600		200		8	
Salem.....	2,100		2,300		200		10	
Cambridge.....	2,280		2,380		100		4	
Somerville.....	2,350		2,450		100		4	
Brockton.....	2,000	1,250	2,000	1,300	0	50	0	4
Chelsea.....	1,800		1,800		0		0	
Everett.....	2,300		2,300		0		0	

	Men.	Women.
Increase in maximum:		
Highest.....	\$710 New Bedford.	\$200 Medford.
Average.....	283	125
Lowest (where any increase was given).....	100 Cambridge. Somerville.	50 Brockton.
Boston's.....	144	120
Boston's rank.....	9th out of 11 cities.	2d out of 3 cities.

Three cities, Brockton, Chelsea, Everett, have given no increase in maximum since September, 1917, to men.

High School Teachers — Continued.

TABLE 66.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum, Annual Increase and Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Population.

	Sex.	Minimum.	Annual Increase.	Maximum.
Boston.....	Men.....	\$3,348	\$144	\$4,212
Worcester.....		3,250	250	3,750
Fall River:				
Two schools.....		No data	No data	3,000
One school.....		No data	No data	3,900
New Bedford.....		No data	No data	4,025
Cambridge.....		3,060	180	3,700
Lowell.....				3,300
Lynn.....		2,700	No data	3,000
Lawrence.....				3,500
Somerville.....				3,700
Brockton.....		No data	100	3,000
Haverhill.....				3,000
Chelsea.....				2,800
Pittsfield.....				3,000
Everett.....				3,000
Salem.....				3,100
Medford.....				3,200

High School Teachers—Continued.

TABLE 67.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Minimum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Principals in Each City.

Worcester	\$3,250
Cambridge	3,060
Lynn	2,700

Highest minimum	\$3,250	Worcester.
Average minimum	3,003	
Lowest minimum	2,700	Lynn.
Boston's minimum	3,348	
Boston's rank, 1st out of 4 cities.		

TABLE 68.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries of September, 1919, in Massachusetts Cities and Towns of 30,000 Population or Over, Arranged According to the Lowest Salary Paid to Principals in Each City.

New Bedford	\$4,025
Cambridge	3,700
Somerville	3,700
Lawrence	3,500
Lowell	3,300
Medford	3,200
Salem	3,100
Brockton	3,000
Everett	3,000
Fall River:	
Two schools	3,000
One school	3,900
Haverhill	3,000
Lynn	3,000
Pittsfield	3,000
Chelsea	2,800

Highest maximum	\$4,025	New Bedford.
Average maximum	3,282	
Lowest maximum	2,800	Chelsea.
Boston's maximum	4,212	
Boston's rank, 1st out of 15 cities.		

High School Teachers — Concluded.

TABLE 69.

(c) PRINCIPAL.

(Includes the Chief Administrative and Executive Officer of the School District.)

Maximum Salaries in Massachusetts Cities and Towns of 30,000 Population or Over of September, 1919, as Compared with September, 1917, Arranged According to the Amount of Increase of the Lowest Paid Principal in Each City.

	SEPTEMBER, 1917.	SEPTEMBER, 1919.	INCREASE.	PER CENT INCREASE.
	Men.	Men.	Men.	Men.
New Bedford.....	\$3,050	\$4,025	\$975	32
Worcester.....	3,200	3,750	550	17
Lawrence.....	3,000	3,500	500	17
Medford.....	2,800	3,200	400	14
Somerville.....	3,350	3,700	350	10
Haverhill.....	2,700	3,000	300	11
Lowell.....	3,000	3,300	300	10
Chelsea.....	2,600	2,800	200	8
Everett.....	2,800	3,000	200	7
Cambridge.....	3,600	3,700	100	3
Salem.....	3,000	3,100	100	3
Brockton.....	3,000	3,000	0	0
Lynn.....	3,000	3,000	0	0

Increase in maximum:

Highest \$975 New Bedford.

Average 361

Lowest (where any increase
was given) 100 Cambridge.
Salem.

Boston's 144

Boston's rank, 10th out of 12 cities giving increase.

Two cities, Brockton and Lynn, have given no increase in
maximum to principals since September, 1917.

ANNUAL REPORT OF SCHOOL COMMITTEE

CITY OF BOSTON, 1919-20.





REPORT.

This report of the Boston School Committee for the year 1919-20 confines itself to various legislative and financial matters of the year in which the school system has been deeply concerned, and to which the Committee has been obliged to devote a great deal of thought and attention.

It is, indeed, an unusual year in which the Boston public school system is not affected directly or indirectly by legislation of one sort or another. It may be legislation of a state-wide nature in which it may or may not be desirable for Boston to be included, or legislation affecting the Boston schools only. Frequently it is legislation petitioned for either by the School Committee or by other persons or organizations who desire a change in the policy, administration, curriculum or other matters relating to the public school system. But however such legislation may be initiated, it becomes the duty of the School Committee to examine promptly the nature of it, and to take such position as the circumstances warrant, either in favor or in opposition, or by abstaining from taking any attitude thereon.

The Legislature of 1918 established a Recess Committee which brought before the following Legislature many recommendations on the subject of public education throughout the Commonwealth, more numerous and important than had arisen in over fifty years. The Boston School Committee gave consideration to each of the bills recommended by this Recess Committee, and took a position for or against those in any way affecting the Boston school system. As a Committee, however, it did not take any position, either for or against bills of a general educational character in which Boston was not directly concerned, but left its individual members free to express their opinion

thereon, so far as they saw fit, before the Legislative Committee or elsewhere. It so happened that a majority of the members of the Committee, in their individual capacity, favored all the bills that ultimately became law.

Two bills were introduced by the School Committee in the Legislature during the year. One became necessary to retain the financial status of the Committee, and the other was brought to relieve the Boston school children from a transportation discrimination that had existed for over twenty years, whereby they were compelled to pay the full adult carfare, although the children in every other city and town in the state, except where the Boston Elevated Railway Company operated, were required by law to pay only one half of the adult car fare on street railways to and from their homes to the schoolhouse.

After a hearing before the Legislative Committee to which the bill for half-fare to school children was referred, it was referred to the Public Service Commission for investigation and report to the Legislature of 1920. A hearing upon this subject of the case came before the Ways and Means Committee and though the School Committee objected strenuously to that action, the Ways and Means Committee recommended leave to withdraw and that recommendation was accepted by the Legislature.

All this happened, however, so unexpectedly that the Committee was unable to organize such friends of the measure as it felt it had in the Legislature. Another bill, however, to the same effect had been introduced by a representative from the city of Cambridge, where the school children were under the same discrimination as in Boston because its street railway car service is furnished by the Boston Elevated Railway Company. The Committee learning of this bill still pending, although unfavorably reported by the Committee to which it had been referred, joined its forces at once with the friends of the Cambridge bill and after a

vigorous contest succeeded in getting the bill substituted for the Committee's report and by careful and patient work carried it through to final enactment. Thus was abolished a handicap of twenty years' standing on the children or parents whose lot is difficult enough rearing and educating children without being compelled to pay adult rates for transportation.

The School Committee derives its funds from taxation under direct authority from the Legislature, empowering it to appropriate so many dollars and cents upon each one thousand dollars valuation of the city on which appropriations of the City Council are based.

By the operation of the Income Tax Law, which went into effect in 1917, the valuation of the city was reduced by the amount of intangible property no longer required to be reported to the assessors of the city, because it is reported to the Tax Commissioner of the Commonwealth under the Income Tax Law.

Because, therefore, of the decrease in income that was caused by this decreased valuation in the year 1918, the School Committee petitioned for legislation resulting in chapter 132 of the Special Acts of 1918, authorizing the School Committee to appropriate an additional 17 cents on each \$1,000 of the city's valuation as determined for appropriating purposes. This did not remedy the matter, however, except for the year 1918, because the basis of the City Council appropriation, which by law is made also the School Committee's basis, is the average valuation for the three prior years. That is to say, the tax limit of any given year in the city of Boston is to be applied in determining the amount of taxation that it is possible to raise, not to the assessed value as found by the assessors of any given year but to the average assessment for that and the two prior years. Therefore, when the loss came in 1918, it was known that there would be additional losses in each of the next two years. The only way that the extent of the losses to be sustained in the next two years, namely, 1919 and 1920, could be known was by estimation, and

it was thought that instead of estimating a matter so important, it would be better in 1918 to take care of that year solely and in 1919, with two of the three years' actual losses known, to estimate the third year, which could then be done with greater accuracy. This year, therefore, a bill was brought to meet the actual loss that would result in 1919 and 1920. When this bill was brought, the Committee deemed it advisable and appropriate to codify by a restatement all the laws on which the School Committee's authority to appropriate money is based. The bill drawn, which became a law — chapter 206, Special Acts of 1919 — contained all those appropriating powers theretofore at any time granted the School Committee by the Legislature, in addition to provisions for restoring the losses caused by the operation of the Income Tax Law.

The bill was not, therefore, a bill to extend the appropriating authority of the School Committee in the sense that the School Committee was to derive more funds from the city, but simply to make up to the School Committee what the city was receiving in another form from the state through the Income Tax Department. It was necessary, therefore, for the School Committee to obtain this legislation in order to maintain the amount it was formerly authorized to appropriate.

By an amendment added during the last stages of the legislation it was not to become a law until it had been approved by the School Committee, the City Council and the Mayor. The School Committee and the City Council approved it promptly. The Mayor, however, appointed a Committee of three citizens, one the president of a college located in Boston, another a former chairman of the School Committee, and the third a former chairman of the Board of School-house Commissioners, to investigate the whole question and to advise the Mayor what course he should take.

After being furnished by the School Committee with such information as it desired, and the holding of a

conference between the two Committees the Mayor's Committee came to a favorable decision and advised the Mayor to approve the act, which he subsequently did.

During this period the teachers, through their various organizations, had become more and more active in agitating further salary increases, and asked for a flat increase of \$600 per annum for every teacher in the elementary schools.

The Legislature had announced at its adjournment in July that it would convene in special session in November to hear the report of a special committee which it had appointed to study the street railway situation throughout the Commonwealth. The School Committee took steps to have the question of additional appropriating power granted it in order that it might increase the salaries of its teaching staff considered at this special session in order that the increase might go into effect on January 1, 1920. It procured the Mayor's written assent to this proposition, and laid a petition before his Excellency the Governor to have the matter included in his proclamation calling the Legislature in special session. This was done. On November 10 the Committee had concluded its work of revising existing salary schedules and announced its decision to representatives of the teachers' organizations on that day. The new schedules which the Committee proposed were not acceptable to the teachers, although the Committee felt that it had gone to the utmost limit in advancing salaries, so far as it was possible with due regard to the financial interests of the city, and after a careful investigation of the salaries paid public school teachers elsewhere in twenty-four of the largest cities in the country, from which it had obtained data on the subject.

The Committee invited representatives of the teachers to a conference in this matter, which was held on November 14, at which the teachers reaffirmed their position and were insistent that a flat increase of \$600

should be made. This was the first time, however, that all groups of teachers had united solidly on this proposition.

On November 17, after reconsidering the matter very carefully, the School Committee announced its decision of adhering to its original schedules. The teachers thereupon, or a large number of them, began a campaign to carry their wishes into effect, and to force the Committee to accept their views. They employed counsel and a bill was prepared and filed by him in the Legislature providing in substance for additional appropriating power to the School Committee sufficient to pay each teacher and member of the supervising staff a flat increase of \$600.

The Legislature referred this bill, as well as the one filed by the School Committee, and the general question of additional funds to increase the pay of teachers as set forth in the Governor's proclamation, to the joint standing committee on Municipal Finance.

After various conferences and hearings, and an emphatic assertion on the part of the School Committee of its authority to determine what salaries should be paid to its teaching staff, the Legislative Committee reported unanimously in favor of the School Committee's bill, which finally passed both branches of the Legislature and was signed by the Governor. Appropriations authorized thereunder were promptly made by the School Committee and its proposed schedule put into effect on January 1, 1920.

During the progress of this matter the teachers were apparently very apprehensive that the increases proposed by the School Committee would be final and conclusive, and that with the rising cost of living the advances which the School Committee proposed would by no means keep pace. The School Committee, however, stated explicitly that this was not its attitude and that it would be disposed, if the necessity arose and it was convinced that such action was desir-

able and just to the teaching force, to advocate further increases in the compensation of its teaching staff.

The School Committee has been, is, and probably will continue to be heartily in favor of payment of adequate salaries to the teachers in the public schools. It is obliged to consider, however, how great a burden can fairly be placed upon the citizens of Boston in obtaining the funds necessary for this purpose. It cannot ignore the general financial condition of the city, nor attempt to secure too large a portion of the city's revenue for this purpose. It desires to be fair, indeed liberal, in its treatment of this matter so far as the teachers are concerned. It recognizes their rights, their duties, their responsibilities, and the great burden that they, as well as other salaried employees in various occupations, have been called upon to bear during the last few years. The Committee recognizes fully the importance of having in effect salary schedules sufficiently high to retain and attract competent teachers. It does not believe that the existing salary schedules are, in all respects, adequate. It trusts sincerely that if the situation warrants it that in the near future the present schedules may be replaced by others that will be considered by fair-minded persons, both in and out of the school system, as fair and reasonable, and that will provide the teachers in our public schools with an income sufficient to maintain the position to which their duties, responsibilities and position in the community entitle them to hold.

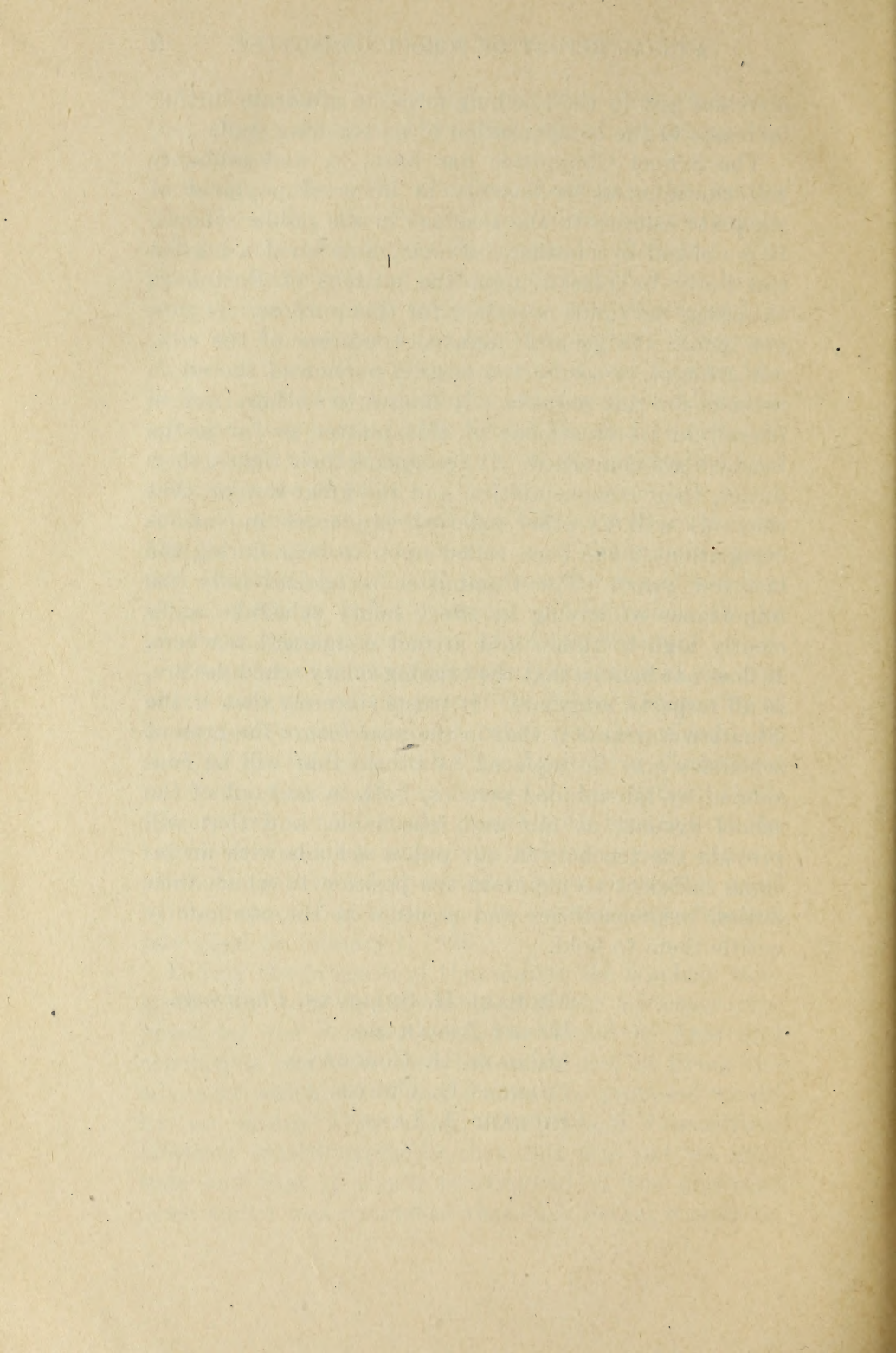
MICHAEL H. SULLIVAN, *Chairman.*

HENRY ABRAHAMS.

MICHAEL H. CORCORAN.

FRANCES G. CURTIS.

RICHARD J. LANE.





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